

10/537121

1

SEQUENCE LISTING

JC17 Rec'd PCT/PTO 02 JUN 2005

<110> diaDexus, Inc.
Macina, Roberto
Turner, Leah
Sun, Yongming
Rodriguez, Maria

<120> Compositions, Splice Variants and Methods Relating to Colon
Specific Genes and Proteins

<130> DEX-0449

<150> US 60/431,143

<151> 2002-12-04

<150> US 60/431,206

<151> 2002-12-04

<160> 259

<170> PatentIn version 3.1

<210> 1

<211> 1101

<212> DNA

<213> Homo sapien

<400> 1

```
ggsgcgccgr rccgcgccgg gccggctcca gggcgccgcg ggcggtgggg cgcaggccgc 60
cgcgcgagtg aatcgaggcg gcggggcccat ccggaaccgg ccggccatcg cccgcggcgc 120
ggccggcgga ggcggcagga accgaccggc gccctacagc aggccaaaac aacttcccca 180
caagtggcag cacgatcttt tcgacagtgg cttcggcggt ggtgccggcg tggagacagg 240
tgggaaactg ctggtgtcca atctggattt tggagtctca gacgccgata ttcaggaact 300
ctttgctgaa tttggaacgc tgaagaaggc ggctgtgcac tatgatcgct ctggtcgcag 360
cttaggaaca gcagacgtgc actttgagcg gaaggcagat gccctgaagg ccatgaagca 420
gtacaacggc gtccctcttg atgcaagcta catccctccc ctccctcagc tccttccgga 480
agattcactt ctgtgaagcc ttctcagaac cgccatagta cacctctgag tgcggggctg 540
tagtcgtaaa gacaaaggcc gcccatgaa cattcagctt gtcacgtcac agattgacgc 600
acagcggagg cctgcacaga gcgtaaacag aggtggcatg actagaaacc gtggcgctgg 660
aggttttggg ggtgggtggg gcaccgggag aggcacccgc ggaggcgccc gtggaagagg 720
cagagggtgcc ggcaggaatt caaagcagca gctttcggca gaggagctgg atgccagct 780
ggacgcctat aatgcgagaa tggacaccag ttaaacagac cagcaaattcc gcgtgcggaa 840
caggaccagc gcgtctcttc ttgctccctg gttggggggc ggtggctggg gctgtgcggc 900
caatgatgga tttgtttctt ttatgtttta aaataggatt taaaaactca tgtaaaggtt 960
tttttttttt cttttttttt ttttttaatt ctgaaacaga cctgttttgt accgagttat 1020
```

ttttgggata aattttactg gttgctgttg tggagaaggt ggcgtttcca ccttttccat 1080
 aataaaatag aaatgtgtgt a 1101

<210> 2
 <211> 1022
 <212> DNA
 <213> Homo sapien

<400> 2
 cgaacgcctt cgcgcgatcg ccctggaaac gcattctctg cgaccggcag ccgccaatgg 60
 gaagggagtg agtgccacga acaggccaat aaggaggagg cagtgcgggg tttaaatctg 120
 aggctaggct ggctcttctc ggcgtgctgc ggcggaacgg ctgttggttt ctgctggctg 180
 taggtccttg gctggtcggg cctccgggtg tctgcttctc cccgctgagc tgctgcctgg 240
 tgaagaggaa gccatggcgc tccgagtcac caggaaactg aaaattaatg ctgaaaataa 300
 ggcgaagatc aacatggcag gcgcaaagcg cgttcctacg gcccctgctg caacctccaa 360
 gcccggactg aggccaagaa cagctcttgg ggacattggg aacaaaagtca gtgaacaact 420
 gcaggccaaa atgcctatga agaaggaagc aaaaccttca gctactggaa aagtcattga 480
 taaaaaacta ccaaaacctc ttgaaaaggc acctatgctg gtgccagtgc cagtgtctga 540
 gccagtgccg gagccagaac ctgagccaga acctgagcct gttaaagaag aaaaactttc 600
 gcctgagcct attttggttg atactgcctc tccaagccca atggaaacat ctggatgtgc 660
 ccctgcagaa gaagacctgt gtcaggcttt ctctgatgta attcttgcag taaatgatgt 720
 ggatgcagaa gatggagctg atccaaacct ttgtagtga tatgtgaaag atatttatgc 780
 ttatctgaga caacttgagg aagagcaagc agtcagacca aaatacctac tgggtcggga 840
 agtcactgga aacatgagag ccacctaact tgactggtag tacagggtca aatgaaatcc 900
 gtgtgtgcgg gacctgtctg cggctctatt gacgggcccg caaaattggg tgcccaaatt 960
 gctggggggc cggccgtttg gcccttgaaa ggccccaggg ggcgttgggg gaccttagca 1020
 ga 1022

<210> 3
 <211> 6046
 <212> DNA
 <213> Homo sapien

<400> 3
 acagtgtcat ggaggccgcg gcggtgacgg tcaccgggtc ggctacacgg cggcggcggc 60
 ggcagctgca ggggctggcg gccccggagg cggggacgca ggaggagcag gaggatcagg 120
 agcccgggcc gcggcgggcg cggccgggaa ggagcatcaa agatgaagaa gaagagacag 180

tctttcgaga ggtggtcagt ttttccccgg accccctgcc agttagatat tatgacaagg	240
acaccaccaa accaatcagc ttttacttgt cttcgctgga ggagctcttg gcgtggaagc	300
cccgccttga g gatggcttt aatgtggccc tggagcccct ggcggtgcgc cagccccctc	360
tgagcagcca gaggccccgg actttgttgt gtcatgacat gatggggcggg tacctggatg	420
acaggttcat tcagggtcgc gtggtgcaga ctccctatgc tttctaccac tggcagtga	480
tcgagctctt tgtgtacttc agccaccaca ccgtcaccat tccccagtg ggctggacca	540
acactgcca caggcatggg gtctgcgtgc tggggacttt catcacggag tsgaatgaag	600
ggggaaggct ctgtgaagcc ttctggccg gggatgagcg ctcgtagcag gcagtggctg	660
accggctggt ccagatcact cagttttttc gttttgatgg ctggctgac aacatcgaga	720
actcgtgag tctggccgct gtggggaaca tgcctccttt cctgcggtac ctaccacac	780
agctgcaccg gcagggtcca gggggcctgg tgcctcggta tgacagcgtg gtgcaaagtg	840
ggcagctcaa atggcaagac gaactcaacc agcacaacag ggtcttcttt gattcctgcg	900
acggcttctt cactaactat aactggcggg aggagcactt ggagcggatg ctggggcagg	960
ctggggagcg ccgggctgat gtgtacgtgg gcgtggatgt gtttgctcga gggaaagtgg	1020
tcggaggccg attcgacaca gacaaggtag gtggtggtt tcgtccaagg gccagcggcc	1080
cagtgcctcc cctgggacct catctctca tggaccttc attccgtct gcacctcaa	1140
ggaatgacag cagctgttct tcccagagt gggatcccgt ggcactgaga aacagggtgc	1200
ctgccccggc caagctatgt cccactgaa acccctttcc cggctatttc tacaatcaga	1260
taatgtattt ttgtgtgggt gttaccagac agaggcgcgt cgttcccccg ctgtccggtc	1320
ctcggcgggc ctgggacctc tgtccagct gcgttccttg atcttccccg tgagggaagc	1380
ctgcggggac gcacaggggc ctgcagcgcc tctcactgcg gctcaggggc gaggacgggg	1440
gaggtgcccc ggggttgggg atcggtaggt gtcatgacga gggagcattt tctggcaagg	1500
caggtcacac cagcacagag gaaggagcgg ggccaggccg gtgcccctgg cgtgggatgc	1560
gcagggtctt gcctgcctct ggtctatcag tcctgcccgt tcccagagcc ccagggatgt	1620
tctcagccct taatttagct ttaaatgagt aaattaatcc aataactaaa gagcctcttt	1680
actgcccgtg attctgataa tcgaatgaga ggtgtgccag aggacaatgg gaccgcgcag	1740
ccacagccag ttggggccca gccctgccc cctgcccctt gcagcagcgc tgaccgcctc	1800
tcccgcgccc tcttctggcg ggcttgtgga acgaacgggg tgatgccag cagcctccag	1860
gtgcacttag gaggagggg ttggacagct tccccctccc gtttctgagc tgccctgaga	1920
gccccaaacc acgtcactgg cgtccaggag cctgtctgga ctctggctct gatgtgcccc	1980
gcgtctccct ctgtctcttc agtcgttggg gctgatccga aagcatggct tctccgtggc	2040

tttgtttgcc cccggctggg tgtatgagtg tctggagaag aaggatttct tccagaacca 2100
ggacaagttc tggggccgac tggagcggtta tctgcccaca catagcatct gctccttgcc 2160
tttcgtcacg tccttctgcc tgggcattgg tgcacggagg gtctgctatg gccaggaaga 2220
ggcggtaggg ccctggtacc acctgagcgc ccaggagatc cagcccttgt ttggagaaca 2280
caggctggga ggggatggcc ggggctgggt gaggacgcac tgctgcctgg aggatgcctg 2340
gcacggaggc agctccctgc tcgtccgggg tgtgatccca ccggagggtg gaaatgtggc 2400
tgtgagggtg gtgagtgcg gaggacggtg ggcccaccag cttctcccat cacacgtggt 2460
ggccatggaa ctggacagat ggggcagtgg aggccagaac aaggacagag gacagacca 2520
gatgggtttt ttaaaattgt gatcaaaaat gcattaacgt gaaattcacc atcttgacct 2580
tgttgaagtg aacggtacag gagtgttaac tctgcgtacg ttgctacgtg acagatcccc 2640
agaactgtgt catctttag gactggacct tccccattgc acattagccc cccatccctc 2700
cccagcccc caaagccacc cctttactct gcactctgta gtttgatac tttagatgcc 2760
ccatatgagg gaatcccata cggtatttca gaactgagat gtttcagccc aaaaagaat 2820
ctggccttgg gggaggactt gtcccttggc tacggacagg accacgatgt gggagcattt 2880
ggcaccaggg cccctgttc ctggaggagg gggctgggtg acgcatgtg gagctggctt 2940
cgatttctca gtggtctctc cacggcacc atcacaggac ctttttccc aggttatttt 3000
tattccctgc agggcccagt gccacccaag atttacctgt ccatgggtga taagcttgag 3060
gggcccacgg acgtcacagt tgctttggag ctgaccacag gggatgccgg cagctgccac 3120
atcggtggca tctcagtgtt gaacgcagaa acaagctcaa gacacagcct ccgacccctc 3180
cgggtgcccc ccaccaagct ggccagatgg gtgggcccgt gcggccggca gctgagtggg 3240
ggctgggtcc agcactgcta cgaggtgagc ctgcgtgggt gcctgctgct agacctctc 3300
gtttgcttct cacggccgcc gggtagtcgg gaggaggaga gcttcacctg tcggcttga 3360
gagatccagg tgggtggacg tgcagcctg ctggcccctc tgcccagggt gcaggccgtc 3420
accatctctc acatccgctg gcagccatcc gcctctgagc gggaggggccc ccctgctctg 3480
ctccagctca gctgcaccct gactgggtcc ttctctctc cacaagtccg ttgcttccga 3540
atccactgct ggggagggat gagtgatgac tctccgggca gggagctgcc gaggccagag 3600
atgcccatgt tcctgggggt ggcttttgcc acccagtacc ggatagtga cctgctgggtg 3660
gaagccgccg ggcccggcca ggatcgctgc atggaatttc tgggtggagcc tgtccccaag 3720
gaagggttcc gggtagctca ggcgagtg ggcagggcag ttctgcttta ttcagcccct 3780
gcatgagcgg atgctaaggc cgggtgggtc cctggcctcg ggctgaggcc tcttcccggc 3840

tgtctgcccc tggcctgcgc tggacctgct aagtgccac agtggcagcg aggtcccggg 3900
cccggggctg ggggtgggaga ccccgggctg agtgctgtgg ctttctgggtg gggggcgatg 3960
gaaacaggaa accaagcagt gggatcgag cgttggtcac tgcgagcgga gtggcgggct 4020
ttctgtttct gccttgtccc tccccacggg acctggttcc cagggtgaaaa tgaaaggagg 4080
ggagaagttg agaacagaac attccataaa ggatatttcc taataggctg caagatgctg 4140
atgccgagaa tgatgatttt ctttctgca gatgaaacta ttagaaaagg tcttagattg 4200
tggcaggtag gctttggagc aggcgcgag acatttctga gcatgaggac gagctacagc 4260
agctcctggg gtggggctgc ctgcgggatg ggggagagg atgccctgga gaaccgtcct 4320
cccatgttg aaggcccttt tccctgagga gtgggcattc tgggccagcc ggcgctggct 4380
tcgtgcctcc acgtgggcca gcccagctg ctccgtgttt cctggcggtg scaatttact 4440
gtgctgctga gtgtgaggtc atctccggag cgttttcagc agcccctggc tctgcggcgt 4500
ctcttccggg ctgtgggcat gcagggaagt ggctctgagg cagtctgcgc tgtggccctg 4560
cctctgcccc gcgagaggcc gtgggctctg gacaagccgc ccttcaggct ggggtagcag 4620
gtcagtcag gcaggaagca gcacctgcc cccgcgccag cccagcccca gcctgagtgc 4680
aggagctgca ggaccgcgg gggcttttcc agctactctg ttccttcacg tcctcccttc 4740
tcagcctcgt ccaagcaccg ggaagacctc caggctgacc ccttgagcag cagtcagcac 4800
aggtgcgtgg gggcgtagg gaggcagggt cttaccaca ggcgccttcc tctgtccttc 4860
ctgctctttc ttctctgccc aggcgcgtgc agctgcacag cctctgctac acctgggctg 4920
cctgggaggc ttcctggtgt ggtgtctgga cccacggcc ttgggtcacc ctgtggctgg 4980
tctggsgtgg ggtctgttgt ggtccttcca cgggtgcagt ggcctgaagt ccctcgcttt 5040
tggggggggg gtctctcacc ccagggcac atagggccag tggtaggggt tcctctatg 5100
tcgggcagtg ctgagggctg ggatgctctg tgacccagc tggagccac acctaaagggc 5160
tggcatccac atcatttcac cctgcagtga ggaagaggc caccagggtg cagcacagcc 5220
acaccgcttc ccacgtcaga ggagggaag gctgggtact cagcagccac tctgagccgg 5280
ggctccttcc aggagctgaa atccacctgt ctccatcttc cttgcctgcc tgggtactca 5340
tgccaagcag agactgggat taggggttct gtgctcttgc ctaattagga acattctccc 5400
atgtctcttg tgtgggtcca gaaggagaag tgagtttgcc aaggatatgg ggcaggaggc 5460
tcctctgct gacccctgc agcctggagc cagcccggg actgtcctgg gtggagggca 5520
ggtgaacaca agctgctgcc ggggactgtc ctgggtggac ggcaggtgaa cacaagcggc 5580
tgccgcatgt agccactcac tcgacttttt tttagctgtg accattcctg ggagctcttt 5640
gagcctttct gtctcatttg gaaccagggg gaaccaggaa ggggctcctg gcctctctgt 5700

```

gtcctctgca gtgggggttg tggggggcgc agcatccacg ccttgctgcé cttctttcat 5760
gaagtctgtt ttttaagtgc tggttccccc gaatatatta tgcagaggag ggaaaattta 5820
tagtggcaat tattttctca cagtctggtg agcaggcaat taattaggag taagggggcc 5880
tagtagagcg tggcgtgtgg cagaatcgca ccgccccggc tccccagccc accgccatgc 5940
agggctcgcg tgcgggaaaa ctaatatgcc ggcgtttaag cctgtgcccc tctgctgggt 6000
gtaactgcgc tgaaataaat gatctgacaa tgtgaaaaaa aaaaaa 6046

```

```

<210> 4
<211> 5839
<212> DNA
<213> Homo sapien

```

```

<400> 4
acagtgtcat ggaggccgcg gcggtgacgg tcacccggtc ggctacacgg cggcggcggc 60
ggcagctgca ggggctggcg gccccggagg cggggacgca ggaggagcag gaggatcagg 120
agccgcggcc gcggcggcgg cggccgggaa ggagcatcaa agatgaagaa gaagagacag 180
tctttcgaga ggtggtcagt ttttccccgg accccctgcc agttagatat tatgacaagg 240
acaccaccaa accaatcagc ttttacttgt ctctgctgga ggagctcttg gcgtggaagc 300
cccgtctgga ggatggcttc aatgtggccc tggagccctt ggctgtctgc cagccccctc 360
tgagcagcca gaggccccgg actttgttgt gtcatgacat gatgggcggg tacctggatg 420
acagggttcat tcagggtctg gtggtgcaga ctccctatgc tttctaccac tggcagtgca 480
tcgacgtctt tgtgtacttc agccaccaca ccgtcaccat tccccagtg ggctggacca 540
aactgcccc caggcatggg gtctgcgtgc tggggacttt catcacggag tggaatgaag 600
ggggaaggct ctgtgaagcc ttccctggccg gggatgagcg ctctaccag gcagtggctg 660
accggctggt ccagatcact cagttttttc gttttgatgg ctggctgac aacatcgaga 720
actcgctgag tctggccgct gtggggaaca tgccctcttt cctgcggtac ctaccacac 780
agctgcaccg gcaggcccc gggggccttg tgctctggta tgacagcgtg gtgcaaagtg 840
ggcagctcaa atggcaagac gaactcaacc agcacaacag ggtcttcttt gattcctgcg 900
acggcttctt cactaactat aactggcggg aggagcactt ggagcggatg ctgsggcagg 960
ctggggagcg ccgggctgat gtgtacgtgg gcgtggatgt gtttgctcga gggaaactgg 1020
tcggaggccg attcgacaca gacaaggctg gtgggtggctt tcgtccaagg gccagcggcc 1080
cagtgcctcc cctgggacct catttctca tggaccttcc attcccgtct gcacctcaaa 1140
ggaatgacag cagctgttct tcccagagtg gggatcccgt ggcactgaga aacaggtgtc 1200
ctgccccggc caagctatgt cccactgaa acccctttcc cggctatttc tacaatcaga 1260

```

taatgtatatt ttgtgtgggt gttaccagac agaggcgcggt cgttcccccg ctgtccggtc 1320
ctcggcgggc ctgggcctcc tgtcccagct gcgttccttg atcttccccg tsaggggaagc 1380
ctgcggggac gcacaggggc ctgcagcgcc tctcactgcg gctcaggggc gaggacgggg 1440
gaggtgcccc gsgtttgggg atcggtaggt gtcatgacga gggagcattt tctggcaagg 1500
caggtcacac cagcacagag gaaggagcgg gggcaggccg gtgcccctgg cgtgggatgc 1560
gcagggctct gcctgcctct ggtctatcag tcctgcccgt tcccagagcc tctttactgc 1620
ccgtgattct gataatcgaa tgagagggtg gccagaggac aatgggaccg cgcagccaca 1680
gccagttggg gccagcccc tgccccctg cccttgacgc agcgtgacc gcctctccc 1740
cgccctcttc tggcgggctt gtggaacgac gggggtgatg cccagcagcc tccagtcggt 1800
ggagctgac cgaaagcatg gcttctccgt ggctttgttt gccccggct ggggtgatga 1860
gtgtctggag aagaaggatt tcttccagaa ccaggacaag tcttggggcc gactggagcg 1920
ttatctgccc acacatagca tctgctcctt gcctttcgtc acgtccttct gcctgggcat 1980
gggtgcacgg agggctcgtt atggccagga agaggcggtg gggccctgg accacctgag 2040
cgcccaggag atccagccct tgtttggaga acacaggctg ggaggggatg gccggggctg 2100
ggtagaggac cactgctgac tggaggatgc ctggcacgga ggcagctccc tgctcgtccg 2160
gggtgtgac ccaccggaag ttggaaatgt ggctgtgagg tgggtgagtg acggaggacg 2220
gtggggccac cagcttctcc catcacagct ggtggccatg gaactggaca gatggggcag 2280
tggaggccag aacaaggaca gaggacagac ccagatgggt tttttaaatt tgtgatcaaa 2340
aatgcattaa cgtgaaattc accatcttga ccctgttgaa gtgaacgsta caggagtgtt 2400
aactctgcgt acgttgctac gtgacagatc cctagaactg tgtcatcttg taggactgga 2460
ctctcccat tgcacattag ccccccaccc tccccagcc ccccaaagcc acccctttac 2520
tctgcatctg tgagtttga tacttttagat gcccataatg agggaaatcc atacggtatt 2580
tcagaactga gatgtttcag ccacaaaag aatctggcct tgggggagga cttgtcccct 2640
ggctacggac aggaccacga tgtgggagca tttggcaccc agggccctg ttcttgagg 2700
gaggggctgg tggacgcgat ttggagctgg cttcgatttc tcagtggctc ctccacggca 2760
cccatcacag gaccttttc cccaggttat ttttatccc tgcaggcccc agtgccaccc 2820
aagatttacc tgtccatggt gtataagctt gaggggcccc cggaacgtcac agttgctttg 2880
gagctgacca caggggatgc cggcagctgc cacatcggtg scatctcagt gttgaacgca 2940
gaaacaagct caagacacag cctccgaccc ctccgggtgc cccccacaa gctggccaga 3000
tgggtgggcc gctgcggccg gcagctgagt gggggctggg tccagcactg ctacgaggtg 3060

agcctgcgtg ggtgcctgct gctagacctc ctggtttgct tctcacggcc gccgggtagt	3120
cgaggaggagg agagcttcac ctgtcggctt ggagagatcc aggtggtgga cgctgccagc	3180
ctgctggccc ctctgcccc ggtgcaggcc gtcaccatct ctacatccg ctggcagcca	3240
tccgcctctg agcgggagg gcccctgct ctgtccagc tcagctgcac cctgcactgg	3300
tccttctctc tctcacaagt ccgttgcttc cgaatccact gctggggagg gatgagtgat	3360
gactctccgg gcaggagct gccgaggcca gagatgcccc tgttctctgg gttggctttt	3420
gccaccagat accggatagt ggacctgctg gtggaagccg ccgggcccgg ccaggatcgt	3480
cgcattggaat ttctgggtgga gcctgtcccc aagggaagggt tccgggtacc tcaggccgag	3540
tggggcaggg cagttctgct ttattcagcc cctgcatgag cggatgctaa ggccgggtgg	3600
tctcttggcc tcgggctgag gcctcttccc ggctgtctgc ccttggcctg cgttggacct	3660
gctaagtgcc cacagtggca gcgaggtccc ggtcccgggg ctgggggtggg agaccccggg	3720
ctgagtgtctg tggctttctg gtggggggcg atggaaacag gaaaccaagc agtgggatcg	3780
cagcgttggc cactgagagg cgagtggcgg gctttctgtt tctgccttgt cctccccac	3840
ggtacctggt tcccaggatg aaatgaaagg aggggagaag ttgagaacag aacattccat	3900
aaaggatatt tctaataagg ctgcaagatg ctgatgccga gaatgatgat tttctttctt	3960
gcagatgaaa ctattagaaa gggctctaga ttgtggcagg taggtcttgg agcaggcgcc	4020
gagacatttc tgagcatgag gacgagctac agcagctcct ggggtggggc tgcctgcggg	4080
atggcgggag aggatgccct ggagaaccgt cctcccagtg tgggaaggccc ttttccctga	4140
ggagtgggca ttctgggcca gccggcgctg gcttctgtgc tccacgtggg ccagccccag	4200
ctgctccgtg tttcctggcg ttggcaattt actgtgtctg tgagtgtgag gtcattctccg	4260
gagcgttttc agcagcccc tggctctgcgg cgtctcttcc gggctgtggg catgcagssa	4320
agtggctctg aggcagtctg cgctgtggcc ctgcctctgc ccagcgagag gccgtgggct	4380
ctggacaagc cgccttctag gctggggtag caggctcagtc caggcaggaa gcagcacctg	4440
ccccccgcgc cagcccagcc ccagcctgag tgcaggagct gcaggaccg cgggggcttt	4500
tccagctact ctgttcttcc acgtctctcc ttctcagcct cgtccaagca ccgggaagac	4560
ctccaggctg accccttgag cagcagtcag cacagggtgcg tgggggctg agggaggcag	4620
ggtcttccac acaggcgctt tctctgttcc ttctctgtct ttcttctctg ccagggccgc	4680
tgcagctgca cagcctctgc tacacctggg ctgcctggga ggcttctctg tgtggtgtct	4740
ggaccccacg gccttgggtc atcctgtggc tggctctggg tggggctctg tgtggtctct	4800
ccacgggtgc agtggcctga agtccctcgc ttttgggggg ggggtctctc acccccaggc	4860
cacatagggc cagtggtagg ggttccctct atgtcgggca gtgctgaggg ctgggatgct	4920

ctgtgacccc agctggagcc cacacctaag ggctggcatc cacatcatTTT caccctgcag 4980
 tgagggaaga ggccaccagg tggcagcaca gccacacccg tccccacgtc agaggagggc 5040
 aaggctgggt actcagcagc cactctgagc cggggctcct tccaggagct gaaatccacc 5100
 tgtctccatc ttccttgccct gcctgggtac tcatgcccaag cagagactgg gattaggggt 5160
 tctgtgctct tgcctaatta ggaacattct cccatgtctc ttgtgtggtc ccagaaggag 5220
 aagtgagttt gccaaaggata tggggcagga ggctccctct gctgaccccc tgcagcctgg 5280
 agccagcccc gggactgtcc tgggtggagg gcaggtgaac acaagctgct gccggggact 5340
 gtcctgggtg gacggcaggt gaacacaagc ggctgccgca tgtagccact cactcgactt 5400
 tttttcagct gtgaccattc ctgggagctc tttgagcctt tctgtctcat ttggaaccag 5460
 ggggaaccag gaaggsgctc ctggcctctc tgtgtcctct gcagtggggg ttgtgggggg 5520
 cgcagcatcc acgccttgcT gcccttcttt catgaagtct gttttttaag tgctgggtcc 5580
 cccgaatatt ttatgcagag gagggaaaat ttatagtggc aattattttc tcacagtctg 5640
 gtgagcaggc aattaattag gagtaaggsg gcctagtaga gcgtggcgtg tggcagaatc 5700
 gcaccgcccc ggctccccag cccaccgcca tgcaggsgctc gcgtgcggga aaactaatat 5760
 gccggcgttt aagcctgtgc ccctctgctg ggtgtaaactg cgctgaaata aatgatctga 5820
 caatgtgaaa aaaaaaaaaa 5839

<210> 5
 <211> 5090
 <212> DNA
 <213> Homo sapien

<400> 5
 acagtgtcat ggaggccgcg gcggtgacgg tcacccsgtc ggctacacgg cggcggcggc 60
 ggcagctgca ggggctggcg gccccggagg cggggacgca ggaggagcag gaggatcagg 120
 agccgcggcc gcggcggcgg cggccgggaa ggagcatcaa agatgaagaa gaagagacag 180
 tctttcgaga ggtggtcagt ttttccccgg accccctgcc agttagatat tatgacaagg 240
 acaccaccaa accaatcagc ttttacttgt ctctgctgga ggagctcttg gcgtggaagc 300
 cccgcttggg ggatggcttt aatgtggccc tggagccctt ggcgtgtcgc cagccccctc 360
 tgagcagcca gagggccccg actttgttgt gtcatgacat gatgggcggg tacctggatg 420
 acaggttcat tcagggtcgc gtgggtgcaga ctccctatgc tttctaccac tggcagtgca 480
 tcgacgtctt tgtgtacttc agccaccaca ccgtcaccat tccccagtg ggctggacca 540
 acactgcccc caggcatggg gtctgcgtgc tggggacttt catcacggag tggaatgaag 600
 ggggaaggct ctgtgaagcc ttcctggccg gggatgagcg ctctgaccag gcagtggctg 660

accggctggt ccagatcact cagttttttc gttttgatgg ctggctgac aacatcgaga 720
 actcgctgag tctggccgct gtggggaaca tgccctcttt cctgcggtac ctcaccacac 780
 agctgcaccg gcaggtccca gggggcctgg tgctctggta tgacagcgtg gtgcaaagtg 840
 ggcagctcaa atggcaagac gaactcaacc agcacaacag ggtcttcttt gattcctgcg 900
 acggcttctt cactaactat aactggcggg aggagcactt ggagcggatg ctggggcagg 960
 ctggggagcg ccgggctgat gtgtacgtgg gcgtggatgt gtttgctcga gggaaagtgg 1020
 tcggaggccg attcgacaca gacaagtcgt tggagctgat ccgaaagcat ggcttctccg 1080
 tggctttgtt tgccccggc tgggtgtatg agtgtctgga gaagaaggat ttcttccaga 1140
 accaggacaa gttctggggc cgactggagc gttatctgcc cacacatagc atctgctcct 1200
 tgcccttctt cactgcttct tgccctggga tgggtgcacg gagggtctgc tatggccagg 1260
 aagaggcggg agggccctgg taccacctga gcgccaggga gatccagccc ttgtttggag 1320
 aacacaggct gggaggggat ggccggggct ggggtgaggac gactgctgc ctggaggatg 1380
 cctggcacgg aggcagctcc ctgctcgtcc ggggtgtgat cccaccggag gttggaaatg 1440
 tggctgtgag gtgggtgagt gacggaggac ggtgggcca ccagcttctc ccatcacacg 1500
 tgggtggccat ggaactggac agatggggca gtggaggcca gaacaaggac agaggacaga 1560
 ccagatggg ttttttaaaa ttgtgatcaa aaatgcatta acgtgaaatt caccatcttg 1620
 accctgttga agtgaacggg acaggagtgt taactctgcg tacgttgcta cgtgacagat 1680
 ccctagaact gtgtcatctt gtaggactgg actctcccca ttgcacatta gccccccatc 1740
 ctccccagc cccccaagc cacccttta ctctgcatct gtgagtttg atactttaga 1800
 tgccccatat gagggaatcc catacgggat ttcagaactg agatgtttca gccacaaaa 1860
 gaatctggcc ttgggggagg acttgtcccc tggctacgga caggaccacg atgtgggagc 1920
 atttggcacc caggccccct gttcctggag ggaggggctg gtggacgga tttggagctg 1980
 gcttcgattt ctgagtggc tctccacggc acccatcaca ggacctttt cccagggtta 2040
 tttttattcc ctgcaggccc cagtgccacc caagatttac ctgtccatgg tgtataagct 2100
 tgaggggccc acggacgtca cagttgcttt ggagctgacc acaggggatg ccggcagctg 2160
 ccacatcggt ggcattctcag tgttgaacgc agaaacaagc tcaagacaca gcctccgacc 2220
 cctccgggtg cccccacca agctggccag atgggtgggc cgctgcggcc ggcagctgag 2280
 tgggggctgg gtccagcact gctacgaggt gagcctgcgt ggggtgctgc tgctagacct 2340
 cctcgtttgc ttctcacggc cgccgggtag tcgggaggag gagagcttca cctgtcggct 2400
 tggagagatc cagggtggtg acgctgccag cctgctggcc cctctgcccc aggtgcaggc 2460

cgtcaccatc tctcacatcc gctggcagcc atccgcctct gagcgggagc ggccccctgc 2520
tctgctccag ctcagctgca ccctgcactg gtcccttctc ctctcacaag tccgttgctt 2580
ccgaatccac tgctggggag gcatgagtga tgactctccg ggcagggagc tgccgaggcc 2640
agagatgccc atgttcctgg gggtggcttt tgccaccagc taccggatag tggacctgct 2700
ggtggaagcc gccgggcccc gccaggatcg tcgcatggaa tttctgggtg agcctgtccc 2760
caaggaaggg ttccgggtac ctcaggccga gtggggcagg gcagttctgc tttattcagc 2820
ccctgcatga gcgcatgcta aggccgggtg gtctcctggc ctggggctga ggccctcttc 2880
cggtgtctg cccctggcct gcgctggacc tgctaagtgc ccacagtggc agcgaggtcc 2940
cggtcccggg gctgggggtg gagaccccg gctgagtgct gtggctttct ggtggggggc 3000
gatggaaaca ggaaaccaag cagtgggatc gcagcgttgg tacctcgag gcgagtgccg 3060
ggctttctgt ttctgccttg tccctcccca cggtaacctg ttccagggtg aaaatgaaag 3120
gaggggagaa gttgagaaca gaacattcca taaaggatat ttccctaata gctgcaagat 3180
gctgatgccg agaatgatga ttttctttcc tgcagatgaa actattagaa agggctcttag 3240
attgtggcag gtaggctttg gagcaggcgc cgagacattt ctgagcatga ggacgagcta 3300
cagcagctcc tgggggtggg ctgcctgcgg gatggcgagg gaggatgccc tggagaaccg 3360
tcctcccagt gtggaaggcc cttttccctg aggagtgggc attctggggc agccggcgct 3420
ggcttcgtgc ctccacgtgg gccagcccca gctgctccgt gtttccctggc gttggcaatt 3480
tactgtgctg ctgagtgtga ggtcatctcc ggagcgtttt cagcagcccc tggctctgcg 3540
gcgtctcttc cgggctgtgg gcatgcaggg aagtggctct gaggcagctc gcgtgtggc 3600
cctgcctctg cccagcgaga ggccgtgggc tctggacaag ccgcccttca ggctggggta 3660
gcaggtcagt ccaggcagga agcagcacct gcccccgcg ccagcccagc cccagcctga 3720
gtgcaggagc tgcaggacce gcgggggctt ttccagctac tctgttccct cactgcctcc 3780
cttctcagcc tcgtccaagc accgggaaga cctccaggct gacccttga gcagcagtca 3840
gcacaggtgc gtgggggcgt gagggaggca gggctctcac cacaggcgcc ttctctgtc 3900
cttctgtctc tttcttctct gcccaggccg ctgcagctgc acagcctctg ctacacctgg 3960
gctgcctggg aggttccctg gtgtggtgtc tggacccac ggccttgggt catcctgtgg 4020
ctggtctggg gtgggggtctg ttgtggtcct tccacggtgt cagtggcctg aagtcctcg 4080
cttttggggg sggggtctct cacccccagg ccacataggg ccagtggtag gggttccctc 4140
tatgtcgggc agtgctgagg gctgggatgc tctgtgaccc cagctggagc ccacacctaa 4200
gggctggcat ccacatcatt tcacctgca gtgagggaag aggccaccag gtggcagcac 4260
agccacaccc gttccacgt cagaggaggc caaggctggg tactcagcag ccactctgag 4320

ccggggctcc ttccaggagc tgaaatccac ctgtctccat cttecttgcc tgccctgggta 4380
 ctcatgccaa gcagagactg ggattagggg ttctgtgtc ttgcctaatt aggaacattc 4440
 tcccatgtct ctgtgtggt cccagaagga gaagtgaagt tgccaaggat atggggcagg 4500
 aggtccctc tgctgacccc ctgcagcctg gagccagccc ggggactgtc ctgggtggag 4560
 ggcaggtgaa cacaagctgc tgccggggac tgtcctgggt ggacggcagg tgaacacaag 4620
 cggtgccgc atgtagccac tactcgact ttttttcagc tctgaccatt cctgggagct 4680
 ctttgagcct ttctgtctca ttggaacca gggggaacca ggaaggggct cctggcctct 4740
 ctgtgtctc tgcagtgggg gtgtgtgggg gcgcagcatc cagcctctgc tgcccttctt 4800
 tcatgaagtc tgttttttaa gtgtgtgttc cccgaatat tttatgcaga ggagggaaaa 4860
 tttatagtgg caattatttt ctacagtct ggtgagcagg caattaatta ggagtaaggg 4920
 ggctagtag agcgtggcgt gtggcagaat cgcaccgccc cggtcccca gccaccgcc 4980
 atgcagggtc cgcgtgcggg aaaactaata tgcggcggt taagcotgtg cccctctgct 5040
 ggggtgaact gcgtgaaat aaatgatctg acaatgtgaa aaaaaaaaaa 5090

<210> 6

<211> 5621

<212> DNA

<213> Homo sapien

<400> 6

gcggcggtgg cggaaggag catcaaagat gaagaagaag agacagtctt tcgagagggtg 60
 gtcagttttt ccccgacccc cctgccagtt agatattatg acaaggacac caccaaaacca 120
 atcagctttt acttgtcttc gctggaggag ctcttggcgt ggaagccccc cttggaggat 180
 ggctttaatg tggccctgga gccctggcg tgtcgcagc cccctctgag cagccagagg 240
 ccccgactt tgttgtgtca tgacatgatg ggcgggtacc tggatgacag ggactttcat 300
 caccgagtgg aatgaagggg gaaggctctg tgaagccttc ctggccgggg atgagcgctc 360
 gtaccaggca gtggctgacc ggctggtcca gatcactcag ttttttcggt ttgatggctg 420
 gctgatcaac atcgagaact cgctgagttt ggccgctgtg gggaaacatgc ctcccttccct 480
 gcggtacctc accacacagc tgcaccgga ggtcccaggg ggccctgggtc tctgggtatga 540
 cagcgtggtg caaagtgggc agctcaaatg gcaagacgaa ctcaaccagc acaacagggt 600
 cttctttgat tcctgcgacg gcttcttcac taactataac tggcgggagg agcacttgga 660
 gcggatgctg gggcaggctg gggagcgccg ggctgatgtg tacgtgggag tggatgtgtt 720
 tgctcgaggg aacgtggctg gaggccgatt cgacacagac aaggtgggtg gtggctttcg 780
 tccaagggcc agcggcccag tgcctccctt gggacctcat ttctcatgg accttccatt 840

cccgtctgca cctcaaagga atgacagcag ctgttcttcc cagagtgggg atcccgtggc 900
 actgagaaac aggtgtcctg ccccgccaa gctatgtccc cactgaaacc cctttcccgg 960
 ctatttctac aatcagataa tgtatttttg tgtgggtgtt accagacaga ggcgcgtcgt 1020
 tcccccgctg tccggtcctc ggggggcctg ggcctcctgt cccagctgcg ttccttgatc 1080
 ttccccgtga ggaagcctg cggggacgca caggggcctg cagcgcctct cactgaggct 1140
 caggggcgag gacgggggag gtgcccaggg ttgggggagc ggtagggtgtc atgacgaggg 1200
 agcattttct ggcaaggcag gtcacaccag cacagaggaa ggagcggggc caggccggtg 1260
 cccctggcgt gggatgcgca gggctctgcc tgcctctggt ctatcagtcc tgcccgttcc 1320
 cagagcccca gggatgttct cagcccttaa tttagcttta aatgagtaaa ttaatccaat 1380
 aactaaagag cctctttact gcccgtagt ctgataatcg aatgagaggt gtgccagagg 1440
 acaatgggac cgcgcagcca cagccagttg gggcccagcc cctgcccccc tgcccttgca 1500
 gcagcgctga ccgcctctcc cgcgccctct tctggcgggc ttgtggaacg acgggggtga 1560
 tgcccagcag cctccagtcg ttggagctga tccgaaagca tggcttctcc gtggctttgt 1620
 ttgcccccggt ctgggtgtat gagtgtctgg agaagaagga tttcttccag aaccaggaca 1680
 agttctgggg ccgactggag cgttatctgc ccacacatag catctgctcc ttgcctttcg 1740
 tcacgtcctt ctgcctgggc atgggtgcac ggagggtctg ctatggccag gaagaggcgg 1800
 tagggccctg gtaccacctg agcggccagg agatccagcc cttgtttgga gaacacaggc 1860
 tgggagggga tggccggggc tgggtgagga cgcactgctg cctggaggat gcctggcacg 1920
 gaggcagctc cctgctcgtc cggggtgtga tcccacggga ggttggaat gtggctgtga 1980
 ggtgggtgag tgacggagga cgggtggccc accagcttct cccatcacac gtgggtggcca 2040
 tggaaactga cagatggggc agtggaggcc agaacaagga cagaggacag acccagatgg 2100
 gttttttaa atgtgatca aaaatgcatt aacgtgaaat tcaccatctt gaccctgttg 2160
 aagtgaacgg tacaggagtg ttaactctgc gtacgttgct acgtgacaga tccctagaac 2220
 tgtgtcatct ttaggactg gactctccc attgcacatt agcccccat cctccccag 2280
 cccccaaag ccacccttt actctgcac tgtgagtttg gatactttag atgccccata 2340
 tgagggaatc ccatacggta tttcagaact gagatgttcc agcccacaaa agaactctggc 2400
 cttgggggag gacttgctcc ctggctacgg acaggaccac gatgtgggag catttggcac 2460
 ccaggcccc tgttcctgga gggaggggct ggtggacgcg atttgagct ggcttcgatt 2520
 tctcagtgggt ctctccacgg caccatcac aggaaccttt tccccaggtt atttttatcc 2580
 cctgcaggcc ccagtgcac ccaagattta cctgtccatg gtgtataagc ttgagggggc 2640

cacggacgtc acagttgctt tggagctgac cacaggggat gccggcagct gccacatcgg 2700
 tggcatctca gtgttgaacg cagaaacaag ctcaagacac agcctccgac ccctccgggt 2760
 gccccccacc aagctggcca gatgggtggg ccgctgcggc cggcagctga gtgggggctg 2820
 ggtccagcac tgctacgagg tgagcctgcg tgggtgcctg ctgctagacc tcctcgtttg 2880
 cttctcacgg ccgccgggta gtccgggagga ggagagcttc acctgtcggc ttggagagat 2940
 ccagggtggtg gacgctgcca gcctgctggc ccctctgccc cagggtgcagg ccgtcaccat 3000
 ctctcacatc cgctggcagc catccgcctc tgagcgggag gggccccctg ctctgctcca 3060
 gctcagctgc accctgcact ggtccttcct cctctcacia gtccgttgct tccgaatcca 3120
 ctgctgggga gggatgagt atgactctcc gggcagggag ctgccgaggc cagagatgcc 3180
 catgttcctg gggttggctt ttgccacca gtaccggata gtggacctgc tgggtggaagc 3240
 cgccggggcc ggccaggatc gtgcgatgga atttctggtg gagcctgtcc ccaagggaag 3300
 gttccgggta cctcaggccg agtggggcag ggcagttctg ctttattcag ccctgcctg 3360
 agcggatgct aaggccgggt ggtctcctgg cctcgggctg aggcctcttc ccggctgtct 3420
 gccctggcc tcgctggac ctgctaagtg cccacagtgg cagcgaggtc ccggtcccgg 3480
 ggctgggggtg ggagaccccg ggctgagtgc tgtggctttc tgggtggggg cgatggaaac 3540
 aggaaccaa gcagtgggat cgcagcgttg gtcaactgca ggcgagtggc gggctttctg 3600
 tttctgcctt gtccctcccc acggtacctg gttcccaggc gaaaatgaaa ggaggggaga 3660
 agttgagaac agaacattcc ataaaggata tttcctaata ggctgcaaga tgctgatgcc 3720
 gagaatgatg attttctttc ctgcagatga aactattaga aagggtctta gattgtggca 3780
 ggtaggcttt ggagcaggcg ccgagacatt tctgagcatg aggacgagct acagcagctc 3840
 ctgggggtggg gctgcctgcg ggatggcggg agaggatgcc ctggagaacc gtccctccag 3900
 tgtggaaggc ccttttccct gaggagtggg cattctgggc cagccggcgc tggcttcgtg 3960
 cctccacgtg ggccagcccc agctgctccg tgtttcctgg cgttggcaat ttactgtgct 4020
 gctgagtgtg aggtcatctc cggagcgctt tcagcagccc ctggctctgc ggcgtctctt 4080
 ccgggctgtg ggcattgcagg gaagtggctc tgaggcagtc tgcgctgtgg ccctgcctct 4140
 gccagcgag aggcctggg ctctggacaa gccgcccttc aggcgggggt agcaggtcag 4200
 tccaggcagg aagcagcacc tgccccccgc gccagcccag cccagcctg agtcaggag 4260
 ctgcaggacc cgcgggggct tttccagcta ctctgttcct tcacgtctc ccttctcagc 4320
 ctctccaag caccgggaag acctccaggc tgacccttg agcagcagtc agcacaggtg 4380
 cgtgggggcg tgaggaggc agsgtcttca ccacaggcgc ctctctctgt ccttctctgt 4440
 ctttcttctc tgccaggcc gctgcagctg cacagcctct gctacacctg ggctgcctgg 4500

15

gaggccttcct ggtgtggtgt ctggacccca cggccttggg tcatcctgtg gctgggtctgg 4560
 ggtgggggtct gttgtggtcc ttccacggtg tcagtggcct gaagtccttc gcttttgggg 4620
 ggggggtctc tcacccccag gccacatagg gccagtggta ggggttcct ctatgtcggg 4680
 cagtgtgag ggctgggatg ctctgtgacc ccagctggag cccacaccta agggctggca 4740
 tccacatcat ttaccctgc agtgaggga gaggccacca ggtggcagca cagccacacc 4800
 cgttcccacg tcagaggagg gcaaggctgg gtactcagca gccactctga gccggggctc 4860
 cttccaggag ctgaaatcca cctgtctcca tcttccttgc ctgcctgggt actcatgcca 4920
 agcagagact gggattagggt gttctgtgct cttgcctaatt taggaacatt ctcccatgtc 4980
 tcttgtgtgg tcccagaagg agaagtgagt ttgccaagga tatggggcag gaggctccct 5040
 ctgctgaccc cctgcagcct ggagccagcc cggggactgt cctgggtgga gggcaggtga 5100
 acacaagctg ctgccgggga ctgtcctggg tggacggcag gtgaacacaa gcggctgccg 5160
 catgtagcca ctcaactcgac tttttttcag ctgtgaccat tcctgggagc tctttgagcc 5220
 tttctgtctc atttggaaacc agggggaacc aggaaggggc tcctggcctc tctgtgtcct 5280
 ctgcagtggg ggttgtgggg ggcgcagcat ccacgccttg ctgcccttct ttcattgaagt 5340
 ctgtttttta agtgctggtt cccccgaata ttttatgcag aggagggaaa atttatagt 5400
 gcaattatct tctcacagtc tggtagcag gcaattaatt aggagtaagg gggcctagta 5460
 gagcgtggcg tgtggcagaa tcgcaccgcc cgggctcccc agccaccgc catgcagggc 5520
 tcgcgtgagg gaaaactaat atgccggcgt ttaagcctgt gccctctgc tgggtgtaac 5580
 tgcgctgaaa taaatgatct gacaatgtga aaaaaaaaaa a 5621

<210> 7
 <211> 5519
 <212> DNA
 <213> Homo sapien

<400> 7
 acagtgtcat ggaggccgag gcggtgacgg tcacccggtc ggctacacgg cggcggcggc 60
 ggcagctgca ggggctggcg gccccggagg cggggacgca ggaggagcag gaggatcagg 120
 agccgcggcc gcggcggcg cggccgggaa ggagcatcaa agatgaagaa gaagagacag 180
 tctttcgaga ggtggtcagt ttttccccgg acccctgcc agttagatat tatgacaagg 240
 acaccaccaa accaatcagc ttttacttgt ctctgcctga ggagctcttg gcgtggaagc 300
 cccgcttga ggaatggctt aatgtggccc tggagccctt ggcgtgtcgc cagccccctc 360
 tgagcagcca gaggccccg actttgttgt gtcatgacat gatgggcggg tacctggatg 420
 acaggttcat tcagggtcgt gtggtgcaga ctccctatgc tttctaccac tggcagtgca 480

tcgacgtctt	tgtgtacttc	agccaccaca	ccgtcaccat	tccccagtg	ggctggacca	540
acactgcccc	caggcatggg	gtctgcgtgc	tggggacttt	catcacggag	tggaatgaag	600
ggggaaggct	ctgtgaagcc	ttcctggccg	gggatgagcg	ctcgtaccag	gcagtggctg	660
accggctggt	ccagatcact	cagttttttc	gttttgatgg	ctggctgata	aacatcgaga	720
actcgctgag	tctggccgct	gtggggaaca	tgcctccttt	cctgcggtac	ctcaccacac	780
agctgcaccg	gcagggtccc	gggggacctg	tgctctggta	tgacagcgtg	gtgcaaagtg	840
ggcagctcaa	atggcaagac	gaactcaacc	agcacaacag	ggctctcttt	gattcctgcg	900
acggcttctt	cactaactat	aactggcggg	aggagcactt	ggagcggatg	ctggggcagg	960
ctggggagcg	ccgggctgat	gtgtacgtgg	gcgtggatgt	gtttgctcga	gggaacgtgg	1020
tccgaggccg	attcgacaca	gacaagggtg	gtgggtggctt	tcgccaagg	gccagcggcc	1080
cagtgcctcc	cctgggacct	catttcctca	tggaccttcc	attcccgtct	gcacctcaaa	1140
ggaatgacag	cagctgttct	tcccagagtg	gggatcccgt	ggcactgaga	aacagggtgtc	1200
ctgccccggc	caagctatgt	ccccactgaa	acccctttcc	cggctatctc	tacaatcaga	1260
taatgtattt	ttgtgtgggt	gttaccagac	agaggcgcgt	cgttcccccg	ctgtccggctc	1320
ctcggcgggc	ctgggcctcc	tgtcccagct	gcgttccttg	atcttccccg	tgagggaagc	1380
ctgcggggac	gcacaggggc	ctgcagcgcc	tctcactgcg	gctcagsggc	gaggacgggg	1440
gaggtgcccc	sggtttgggg	atcggtaggt	gtcatgacga	gggagcatct	tctggcaagg	1500
caggtcacac	cagcacagag	gaaggagcgg	ggccaggccg	gtgcccctgg	cgtgggatgc	1560
gcagggtctt	gcctgcctct	ggtctatcag	tcctgcccgt	tcccagagcc	ccagggatgt	1620
tctcagccct	taatttagct	ttaaagtagt	aaattaatcc	aataactaaa	gagcctcttt	1680
actgcccgtg	attctgataa	tcgaatgaga	ggtgtgccag	aggacaatgg	gaccgcgcag	1740
ccacagccag	ttggggcccc	gcccctgccc	ccctgccctt	gcagcagcgc	tgaccgcctc	1800
tcccgcgccc	tcttctggcg	ggcttgtgga	acgacggggg	tgatgcccag	cagcctccag	1860
tgtttggagc	tgatccgaaa	gcatggcttc	tccgtggctt	tgtttgcccc	cggctgggtg	1920
tatgagtgtc	tggagaagaa	ggatttcttc	cagaaccagg	acaagtctctg	gggccgactg	1980
gagcgttata	tgcccacaca	tagcatctgc	tccttgccct	tcgtcacgtc	cttctgcctg	2040
ggcatgggtg	cacggagggg	ctgctatggc	caggaagagg	cggtagggcc	ctggtaccac	2100
ctgagcgccc	aggagatcca	gcccttgttt	ggagaacaca	ggctgggagg	ggatggccgg	2160
ggctgggtga	ggacgcactg	ctgcctggag	gatgcctggc	acggaggcag	ctccctgctc	2220
gtccgggggtg	tgatcccacc	ggaggttggg	aatgtggctg	tgaggtgggt	gagtgcagga	2280

ggacggtggg cccaccagct tctcccatca cacgtggtgg ccatggaact ggacagatgg 2340
 ggcagtggag gccagaacaa ggacagagga cagaccaga tgggtttttt aaaattgtga 2400
 tcaaaaatgc attaacgtga aattcaccat cttgaccctg ttgaagtga cggtacagga 2460
 gtgttaactc tgcgtacgtt gctacgtgac agatccctag aactgtgtca tcttgttaga 2520
 ctggactctc cccattgcac attagcccc catcctcccc cagccccca aagccacccc 2580
 ttactctgc atctgtgagt ttggatactt tagatgcccc atatgagggg atcccatag 2640
 gtatttcaga actgagatgt ttcagccac aaaagaatct ggcttgggg gaggacttgt 2700
 cccctggcta cggacaggac cacgatgtgg gagcatttg caccaggcc ccctgttct 2760
 ggagggagg gctggtggac gcgatttga gctggcttcg atttctcagt ggtctctcca 2820
 cggcaccat cacaggacct ttttccccag gttatttta ttcctgcag gcccagtg 2880
 caccacagat ttacctgtcc atggtgtata agcttgagg gcccacggac gtcacagttg 2940
 ctttgagct gaccacagg gatgccggca gctgccacat cggtgccatc tcagtgtga 3000
 acgcagaaac aagctcaaga cacagcctcc gacccctccg ggtgcccccc accaagctgg 3060
 ccagatgggt gggccgctgc ggcggcagc tgagtgggg ctgggtccag cactgctacg 3120
 aggtgagcct gcgtgggtgc ctgctgctag acctcctcgt ttgcttctca cggccgccc 3180
 gtagtcggga ggaggagagc ttcacctgtc ggcttgaga gatccaggtg gtggacgctg 3240
 ccagcctgct gggccctctg cccaggtgc aggcgtcac catctctcac atccgctggc 3300
 agccatccgc ctctgagcg gaggggcccc ctgctctgct ccagctcagc tgcacctgc 3360
 actggtcctt cctcctctca caagtccgtt gcttccgaat cactgctgg ggaggatga 3420
 gtgatgactc tccgggcagg gagctgccga ggccagagat gccatgttc ctggggttg 3480
 cttttgccac ccagtaccg atagtggacc tgctggtgga agccgcccgg cccggccagg 3540
 atcgtcgcat ggaatttctg gtggagcctg tccccaggga aggttccgg gtacctcagg 3600
 ccgagtgggg cagggcagtt ctgctttatt cagccccctgc atgagcggat gctaaggccg 3660
 ggtggtctcc tggcctcggg ctgaggctc ttcgccgctg tctgcccctg gcctgcgctg 3720
 gacctgctaa gtgccacag tggcagcgag gtcccgtcc cggggctggg gtgggagacc 3780
 ccgggctgag tgctgtggct ttctggtggg gggcgatgga aacaggaaac caagcagtgg 3840
 gatcgacgg ttggtcactg cgaggcgagt ggcgggcttt ctgttctgc cttgtccctc 3900
 cccacggtac ctggttccca ggtgaaaatg aaaggagggg agaagttag aacagaacat 3960
 tccataaagg atatttctta ataggctgca agatgctgat gccgagaatg atgattttct 4020
 ttctgcaga tgaaactatt agaaagsgtc ttagattgtg gcaggtaggc tttggagcag 4080
 gcgccgagac atttctgagc atgaggacga gctacagcag ctctgggggt ggggctgcct 4140

gcgggatggc gggagaggat gccctggaga accgtcctcc cagtgtggaa ggcccttttc 4200
 cctgaggagt gggcatctctg ggccagccgg cgctggcttc gtgcctccac gtgggccagc 4260
 cccagctgct ccgtgtttcc tggcgttggc aatttactgt gctgctgagt gtgaggtcat 4320
 ctccggagcg ttttcagcag cccctggctc tgcggcgtct ctccsggct gtggscatgc 4380
 agggaaagtgg ctctgaggca gtctgcgtg tggccctgcc tctgcccagc gagaggccgt 4440
 gggctctgga caagccgccc ttcaggctgg ggtagcaggc cagtccaggc aggaagcagc 4500
 acctgcccc cgccagcc cagccccagc ctgagtgcag gagctgcagg acccgcgggg 4560
 gcttttccag ctactctgtt ccttcacgtc ctcccttctc agcctcgtcc aagcaccggg 4620
 aagacctcca ggctgacccc ttgagcagca gtcagcacag tgagggaaga ggccaccagg 4680
 tggcagcaca gccacacccg tccccacgtc agaggaggggc aaggctgggt actcagcagc 4740
 cactctgagc cggggctcct tccaggagct gaaatccacc tgtctccatc ttccttgctt 4800
 gcctgggtac tcatgccaaag cagagactgg gattaggggt tctgtgctct tgcctaatta 4860
 ggaacattct cccatgtctc ttgtgtggtc ccagaaggag aagtgagttt gccaaaggata 4920
 tggggcagga ggctccctct gctgaccccc tgcagcctgg agccagcccg gggactgtcc 4980
 tgggtggagg gcaggtgaac acaagctgct gccggggact gtcttgggtg gacggcaggt 5040
 gaacacaagc ggctgccgca tgtagccact cactcgactt tttttcagct gtgaccatc 5100
 ctgggagctc tttgagcctt tctgtctcat ttggaaccag ggggaaccag gaaggsgctc 5160
 ctggcctctc tgtgtcctct gcagtggggg ttgtgggggg cgcagcatcc acgccttgct 5220
 gcccttcttt catgaagtct gttttttaag tgctgggtcc ccgaatatt ttatgcagag 5280
 gagggaaaat ttatagtggc aattattttc tcacagtctg gtgagcaggc aattaattag 5340
 gagtaagggg gcctagtaga gcgtggcgtg tggcagaatc gcaccgcccc ggctccccag 5400
 cccaccgcca tgcagggtc gcgtgcggga aaactaatat gccggcgttt aagcctgtgc 5460
 ccctctgctg ggtgtaactg cgctgaaata aatgatctga caatgtgaaa aaaaaaaaa 5519

<210> 8
 <211> 6102
 <212> DNA
 <213> Homo sapien

<400> 8
 acagtgtcat ggaggccgcg gcggtgacgg tcaaccggct ggctacacgg cggcgggcggc 60
 ggcagctgca ggggctggcg gccccggagg cggggacgca ggaggagcag gaggatcagg 120
 agcccgggcc gcggcgggcg cggccgggaa ggagcatcaa agatgaagaa gaagagacag 180
 tctttcgaga ggtggtcagt ttttccccgg accccctgcc agttagatat tatgacaagg 240

acaccaccaa accaatcagc ttttacttgt cttogetgga ggagctcttg gcgtggaagc 300
 cccgcttgga ggatggcttt aatgtggccc tggagcccct ggcggtgtcg cagccccctc 360
 tgagcagcca gaggccccgg actttgttgt gtcattgacat gatgggaggg tacctggatg 420
 acaggttcat tcagggctcg gtggtgcaga ctccctatgc tttctaccac tggcagtgc 480
 tcgacgtctt tgtgtacttc agccaccaca ccgtcaccat tccccagtg ggctggacca 540
 aactgcccc caggaatggg gtctgcgtgc tggggacttt catcacggag tggaaatgaag 600
 ggggaaggct ctgtgaagcc ttcctggccg gggatgagcg ctcgtagcag gcagtggctg 660
 accggctggg ccagatcact cagttttttc gttttgatgg ctggctgac aacatcgaga 720
 actcgctgag tctggccgct gtggggaaca tgcctccttt cctgcggtac ctccaccac 780
 agctgcaccg gcaggtccca gggggcctgg tgctctggta tgacagcgtg gtgcaaagtg 840
 ggcagctcaa atggcaagac gaactcaacc agcacaacag ggtcttcttt gattcctgag 900
 acggcttctt cactaactat aactggcggg aggagcactt ggagcggatg ctggggcagg 960
 ctggggagcg ccgggctgat gtgtacgtgg gcgtggatgt gtttgctcga gggaaagtgg 1020
 tcggaggccg attcgacaca gacaaagtgg gtggtggctt tcgtccaagg gccagcggcc 1080
 cagtgcctcc cctgggacct catttctca tggaccttc attcccgctt gcacctcaaa 1140
 ggaatgacag cagctgttct tcccagagtg gggatcccg ggactgaga aacagggtgtc 1200
 ctgccccggc caagctatgt ccccaactgaa acccctttcc cggctatttc tacaatcaga 1260
 taatgtattt ttgtgtgggt gttaccagac agaggcgcgt cgttcccccg ctgtccggtc 1320
 ctcgccgggc ctgggcctcc tgtcccagct gcgttccttg atcttccccg tgagggaagc 1380
 ctgcggggac gcacaggggc ctgcagcgcc tctactgcg gctcaggggc gaggacgggg 1440
 gaggtgcccc gggtttgggg atcggtaggt gtcattgacga gggagcattt tctggcaagg 1500
 caggtcacac cagcacagag gaaggagcgg ggcagggccg gtgcccctgg cgtgggatgc 1560
 gcagggtctt gcctgcctct ggtctatcag tcctgcccg tcccagagcc ccagggatgt 1620
 tctcagccct taatttagct ttaaagtagt aaattaatcc aataactaaa gagcctcttt 1680
 actgcccgtg attctgataa tcgaatgaga ggtgtgccag aggacaatgg gaccgcgcag 1740
 ccacagccag ttggggccca gcccctgcc cctgcctt gcagcagcgc tgaccgcctc 1800
 tcccgcgcc tcttctggcg ggcttgtgga acgacggggg tgatgccag cagcctccag 1860
 tcgttgagc tgatccgaaa gcattgcttc tcgtggctt tgtttgcccc cggctgggtg 1920
 tatgagtgtc tggagaagaa ggatttcttc cagaaccagg acaagtcttg gggccgactg 1980
 gagcgttatc tgcccacaca tagcatctgc tccttgctt tcgtcacgtc ctctgcctg 2040

20

ggcatgggtg cacggagggc ctgctatggc caggaagagg cggtagggcc ctggtaccac 2100
 ctgagcgccc aggagatcca gcccttggtt ggagaacaca ggctgggagg g gatggccgg 2160
 ggctgggtga ggacgcactg ctgcctggag gatgcctggc acggaggcag cccccctctc 2220
 gtccgggggtg tgatcccacc ggaggttggg aatgtggctg tgaggtgggt g agtgacgga 2280
 ggacgggtggg cccaccagct tctcccatca cacgtgggtg ccatggaact ggacagatgg 2340
 ggcatgggag gccagaacaa ggacagagga cagaccaga tgggtttttt aaaattgtga 2400
 tcaaaaatgc attaacgtga aattcaccat cttgaccctg ttgaagtga cggtagagga 2460
 gtgttaactc tgcgtacgtt gctacgtgac agatccctag aactgtgtca tctttagga 2520
 ctggactctc cccattgcac attagcccc catcctccc cagccccca aagccacccc 2580
 ttactctgc atctgtgagt ttggatactt tagatgcccc atatgaggga atcccatag 2640
 gtatttcaga actgagatgt ttcagcccac aaaagaatct ggcttgggg gaggacttgt 2700
 cccctggcta cggacaggac cacgatgtgg gagcatattg caccaggcc cccgttccct 2760
 ggagggaggg gctgggtggc gcgatttggg gctggcttcg atttctcagt ggtctctcca 2820
 cggcaccat cacaggacct ttttcccag gttattttta ttcctgcag gccccagtgc 2880
 caccacagat ttacctgtcc atgggtgata agcttgaggg gccacaggc gtcacagtgc 2940
 ctttggagct gaccacaggg gatgcgggca gctgccacat cggtaggcac tcagtgttga 3000
 acgcagaaac aagctcaaga cacagcctcc gacccctccg ggtgcccccc accaagctgg 3060
 ccagatgggt gggccgctgc ggcgggcagc tgagtggggg ctgggtccag cactgctacg 3120
 aggtgagcct gcgtgggtgc ctgctgctag acctcctcgt ttgcttctca cggccggcg 3180
 gtagtcggga ggaggagagc ttcaacctgc ggcttggaga gatccagggt atgcttccca 3240
 gaggggctcg ggctgggtcg gctgttctgc cagctggagt ggggtggag gccgccccag 3300
 gccgccccct tcttgggttc agcggggaac tgggtggag gagtacggga ggggaaatgt 3360
 gtgcgtgggg gcacctctc cccgccccg ggctccagc cgtgctgagc cttctctcct 3420
 gccagggtgt ggacgctgcc agcctgctgg cccctctgcc ccagggtgag gccgtcacca 3480
 tctctcacat ccgctggcag ccatccgct ctgagcggga ggggccccct gctctgctcc 3540
 agctcagctg caccctgcac tggctcttcc tctctcaca agtccgttgc ttccgaatcc 3600
 actgctgggg agggatgagt gatgactctc cgggcaggga gctgccgagg ccagagatgc 3660
 ccatgttctt ggggttggct tttgccccc agtaccggat agtggacctg ctggtggaag 3720
 ccgccgggcc cggccaggat cgtcgcatgg aatttctggg ggagcctgtc cccaaggaag 3780
 ggttccgggt acctcaggcc gagtggggca gggcagttct gctttattca gccctgcat 3840
 gagcggatgc taaggccggg tggctctctg gcctcgggt gaggcctctt cccggctgtc 3900

tgccctggc ctgcgctgga cctgctaagt gcccacagtg gcagcgaggt cccsgtccc	3960
gggctggggt gggagacccc gsgctgagt ctgtggcttt ctggtggsgg gcgatggaaa	4020
caggaaacca agcagtggga tcgcagcgtt ggtcactgcg aggcgagtgg cgggctttct	4080
gtttctgcct tgccctccc caccgtacct gggtcccagg tgaaaatgaa aggaggggag	4140
aagttgagaa cagaacattc cataaaggat atttctaata aggctgcaag atgctgatgc	4200
cgagaatgat gattttcttt cctgcagatg aaactattag aaagggcttt agattgtggc	4260
aggtaggctt tggagcaggc gccgagacat ttctgagcat gaggacgagc tacagcagct	4320
cctgggggtg ggctgcctgc gggatggcgg gagaggatgc cctggagaac cgtcctcca	4380
gtgtggaagg ccttttccc tgaggagtgg gcattctggg ccagccggcg ctggcttcgt	4440
gcctccacgt gggccagccc cagctgctcc gtgtttcctg gcgttggaac ttactgtgc	4500
tgctgagtgt gaggtcatct ccggagcgtt ttcagcagcc cctggctctg cggcgtctct	4560
tccgggctgt gggcatgcag ggaagtggct ctgaggcagt ctgcgctgtg gccctgcctc	4620
tgcccagcga gaggcctgg gctctggaca agccgccctt caggctgggg tagcagggtca	4680
gtccaggcag gaagcagcac ctgcccccg cgccagccca gccccagcct gaggcagga	4740
gctgcaggac ccgcgggggc tttccagct actctgttcc ttcaogtcc ccttctcag	4800
cctcgtccaa gcaccgggaa gacctcagg ctgacccctt gagcagcagt cagcacaggt	4860
gcgtgggggc gtgagggagg cagggtcttc accacaggcg ccttccctctg tccttccctgc	4920
tctttcttct ctgcccaggc cgctgcagct gcacagctc tgctacacct gggctgcctg	4980
ggaggcttcc tgggtgtgtg tctggacccc acggccttgg gtcatacctgt ggctggctctg	5040
gggtggggtc tgtgtgtgtc cttccacggg gtcagtggcc tgaagtccct cgcttttggg	5100
gggggggtct ctacccccca ggccacatag ggccagtggg aggggttccc tctatgtcgg	5160
gcagtgtga gggctgggat gctctgtgac ccagctgga gcccacacct aagggtggc	5220
atccacatca tttcacctg cagtgaggga agaggccacc aggtggcagc acagccacac	5280
ccgttccac gtcagaggag ggcaaggctg ggtactcagc agccactctg agccggggct	5340
ccttccagga gctgaaatcc acctgtctcc atcttccctg cctgcctggg tactcatgcc	5400
aagcagagac tgggattagg ggtctgtgc tcttgcctaa ttaggaacat tctcccatgt	5460
ctcttgtgtg gtcccagaag gagaagtgag tttgccaagg atatggggca ggaggctccc	5520
tctgtgacc ccctgcagcc tggagccagc ccggggactg tcctgggtgg agggcaggts	5580
aacacaagct gctgccgggg actgtcctgg gtggacggca ggtgaacaca agcggctgcc	5640
gcatgtagcc actcactcga ctttttttca gctgtgacca ttctggggag ctctttgagc	5700

22

```

ctttctgtct catttggaac cagggggaac caggaagggg ctcttggect ctctgtgtcc 5760
tctgcagtgg gggttgtggg gggcgagca tccacgcctt gctgoccttc tttcatgaag 5820
tctgtttttt aagtgtggg tccccgaat attttatgca gaggagggaa aatttatagt 5880
ggcaattatt ttctcacagt ctggtgagca ggcaattaat taggagtaag ggggcctagt 5940
agagcgtggc gtgtggcaga atcgacccgc cccggctccc cagcccaccg ccatgcaggg 6000
ctcgctgcg ggaaaactaa tatgccggcg ttttagcctg tgcccctctg ctgggtgtaa 6060
ctgcgtgaa ataaatgatc tgacaatgtg aaaaaaaaaa aa 6102

```

```

<210> 9
<211> 3177
<212> DNA
<213> Homo sapien

```

```

<400> 9
acagtgtcat ggaggccgcg gcggtgacgg tcacccggtc ggctacacgg cggcggcggc 60
ggcagctgca ggggctggcg gccccggagg cggggacgca ggaggagcag gaggatcagg 120
agccgcggcc gcggcggcg cgscgggaa ggagcatcaa agatgaagaa gaagagacag 180
tctttcgaga ggtggtcagt ttttccccgg accccctgcc agttagatat tatgacaagg 240
acaccaccaa accaatcagc ttttacttgc ctctgctgga ggagctcttg gcgtggaagc 300
cccgtttgga ggatggcttt aatgtggccc tggagccctt ggctgtgctc cagcccccctc 360
tgagcagcca gagggcccg actttgttgt gtcattgacat gatgggcggg tacctggatg 420
acaggttcat tcagggtcgc gtggtgcaga cccctatgc tttctaccac tggcagtgca 480
tcgacgtctt tgtgtacttc agccaccaca ccgtcaccat cccccagtg ggctggacca 540
aactgcccc caggcatggg gtctgcgtgc tggggacttt catcacggag tggaaatgaag 600
ggggaaggct ctgtgaagcc ttcttgccg gggatgagcg ctcgtaaccag gcagtggctg 660
accggctggt ccagatcact cagtttttct gttttgatgg ctggctgac aacatcgaga 720
actcgctgag tctggccgct gtggggaaca tgcctccttt cctgcggtac ctaccacac 780
agctgctggt ggaagccgcg gggcccgcc aggatcgtcg catggaattt ctgggtggagc 840
ctgtcccca ggaagggttc cgggtacctc aggcgagtg gggcagggca gttctgcttt 900
attcagcccc tgcattgagc gatgctaagg ccgggtggtc tcctggcctc gggctgagggc 960
ctcttccccg ctgtctgccc ctggcctgcg ctggacctgc taagtgccca cagtggcagc 1020
gagggtccccg tccccgggct ggggtgggag accccgggct gagtgtgtg gctttctggt 1080
ggggggcgat ggaaacagga aaccaagcag tgggatcgca gcgttggtca ctgcgagggc 1140
agtggcgggc tttctgttct tgccttgctc cccccacgg tacctgggtc ccaggtaaaa 1200

```

atgaaaggag gggagaagtt gagaacagaa catccataa aggatatttc ctaataggct	1260
gcaagatgct gatgccgaga atgatgattt tctttcctgc agatgaaact attagaaagg	1320
gtcttagatt gtggcaggta ggctttggag caggcgccga gacatttctg agcatgagga	1380
cgagctacag cagctcctgg ggtggggctg cctgcgggat gscgggagag gatgccctgg	1440
agaacogtcc tcccagtgtg gaaggccctt ttccctgagg agtgggcatt ctgggccagc	1500
cggcgctggc ttcgtgcctc cacgtgggcc agccccagct gctccgtgtt tcttggcggt	1560
ggcaatttac tgtctgctg agtgtgaggt catctccgga gcgttttcag cagccccctg	1620
ctctgcggcg tctcttccgg gctgtgggca tgcagggaag tggctctgag gcagtctgcg	1680
ctgtggccct gcctctgccc agcgagaggg cgtgggctct gsacaagccg cccttcaggc	1740
tggggtagca ggtcagtcca ggcaggaagc agcacctgcc ccccgcgcca gccagcccc	1800
agcctgagtg caggagctgc agsacccggg ggggcttttc cagctactct gttccttcac	1860
gtcctccctt ctacgcctcg tccaagcacc gggaagacct ccaggctgac cccttgagca	1920
gcagtcagca caggtgcgtg ggggcgtgag ggagscaggg tcttcaccac aggcgccttc	1980
ctctgtcctt cctgctcttt cttctctgoc caggccgctg cagctgcaca gcctctgcta	2040
cacctgggct gcctgggagg cttcctgggt tgggtgtctg accccacggc cttgggtcat	2100
cctgtggctg gctcggggtg gggctctgtg tggctcctcc acgggtgcag tggcctgaag	2160
tccctcgctt ttgggggggg ggtctctcac cccagggcca catagggcca gtggtagggg	2220
ttccctctat gtcgggcagt gctgagggct gggatgctct gtgacccag ctggagccca	2280
cacctaaagg ctggcatcca catcatttca ccctgcagtg agggaagagg ccaccagggtg	2340
gcagcacagc cacaccggtt cccacgtcag agsagggcaa ggctgggtac tcagcagcca	2400
ctctgagccg gggctccttc caggagctga aatccacctg tctccatctt ccttgctgc	2460
ctgggtactc atgccaagca gagactggga ttaggggttc tgtgctcttg cctaattagg	2520
aacattctcc catgtctctt gtgtgggtccc agaaggagaa gtgagtttgc caaggatatg	2580
gggcaggagg ctccctctgc tgacccctg cagcctggag ccagcccggg gactgtcctg	2640
ggtggagggc aggtgaacac aagctgctgc cggggactgt cctgggtgga cggcagggtga	2700
acacaagcgg ctgccgatg tagccactca ctgcactttt tttagctgt gaccattcct	2760
gggagctctt tgagcctttc tgtctcattt ggaaccaggg ggaaccagga aggggctcct	2820
ggcctctctg tgtcctctgc agtgggggtt gtggggggcg cagcatccac gccttgctgc	2880
ccttctttca tgaagtctgt tttttaagtg ctggttcccc cgaatatatt atgcagagga	2940
gggaaaattt atagtggcaa ttattttctc acagtctggg gagcaggcaa ttaattagga	3000
gtaagggggc ctagtagagc gtggcggtg gcagaatcgc accgccccg ctcccagcc	3060

caccgccatg cagggctcgc gtgcgggaaa actaatatgc cggcgcttaa gcctgtgccc 3120
 ctctgctggg tgtaactgcg ctgaaataaa tgatctgaca atgtgaaaaa aaaaaaa 3177

<210> 10
 <211> 1956
 <212> DNA
 <213> Homo sapien

<400> 10
 cgggctccac ccccaagcca ggcgaggcag gttccgaggt tggaacacct ggcgagtcct 60
 cgggtgctggg ggccggcagt catctcgcgg ccgttcagga taagccagag acatgggaaa 120
 accaatggaa gtgtttcaaa gttcttctct ttaatcactt ctgtatccag ctgcctttga 180
 tttgtggaac ctattatttt acagagtatt tcaatattcc ttatgattgg gaaagaatgc 240
 caagatggta ttttcttttg gcaagatgct ttgggtgtgc agtcattgaa gatacttggc 300
 actattttct gcatagactc ttacaccaca aaagaatata caagtatatt cataaagttc 360
 atcatgagtt tcaggctcca ttgggaatgg aagctgaata tgcacatcct ttggagactc 420
 taattcttgg aactggattt ttcatggaa tctgtctttt gtgtgatcat gtaattcttc 480
 tttgggcatg ggtgaccatt cgtttattag aaactattga tgtccatagt ggttatgata 540
 ttctctctca ccttttaaat ctgatccctt tctatgctgg ttctcggcat catgatttcc 600
 accacatgaa cttcattgga aactatgctt caacatttac atggtgggat cgaatttttg 660
 gaacagactc tcagtataat gcctataatg aaaagaggaa gaagtttgag aaaaagactg 720
 aataaatatc tcacgtaaac cttctgaaa gataaacgtt ttctgaatt cagaaactag 780
 tagctaacat tgcttctgga gagcagaaat aagcatgtct tctggctact aagtataaa 840
 aagaacatta acaaccttta attaccttcc tagtgggaac ttttctact ttacctaaa 900
 gttctatata tgtagaaatg aataaatata tatttaagta cagttttcat gaggaagttt 960
 taaaagacca tgttcctaag cttccaagaa ggttttggat actagaagta ttaatctatg 1020
 gcttttctcc cagtaaaacc ataggcctga agttcacatt gggctcttaa atctttttaga 1080
 tatatactgg tcatttcaga aaattcttca tagtgggtatt ggccttatat ttaacttttt 1140
 ttttattttt tttttgagac aaagccacac tctgtctcct tggctggagt gtgggtggac 1200
 agtctcagct cactgcaacc tctgcctccc agtcaagca attcttctgc ctacgcctcc 1260
 caagtagctg ggattacagg caccgccac cagcccagc taatttttgt atttttgtag 1320
 agatgggggtt tcacgatgtt ggccaggctg gtctcaaact tctgacctca agtgatctgc 1380
 ccaccttggc ctcccaaagt gctgggatta caggtgtaag ccactgcgc cggccttttt 1440
 aactttaaac atgtttttaga attcacctaa agatcaaaat atcatggatt gaacctcatc 1500

25

```

aattgatagc agtgagtgac tgaagcttcc aaatcaagaa aagccggcac caagaacttc 1560
cattctaatac tagagctgac cagtttgagc tgattctctc tttgaagagt ccttcttgat 1620
tgcagtgcag tactggcatt tctgaatgga tgtaagtgga gtattttagt ctaaaggctt 1680
ttcaaattac ttgaattttt ttaaaaattg aggagcttta tttctattta ccttccatt 1740
tttgtatatac aaatttccat tgtcattaaa aactgtatct tgaaactttg tgaactgact 1800
tgctgtatatt gcactttgag ctcttgaaat aaatgtgatt tttgtgtgat tatctggttt 1860
ccagtttttaa acattaactg tcacctttta ttcttaaact tgaaagtaca gaaatcatta 1920
aattattaag ttgtacaata aagggattgg tttctt 1956

```

```

<210> 11
<211> 1488
<212> DNA
<213> Homo sapien

```

```

<400> 11
gactccaagt cccagctgtg cccgggacgc tgcgcgcccc cgggactcca tttcccagag 60
tgccccgccc cagccctccc gccccgcccc ccaactggct ccgcgggcag ccggagcgca 120
cccggccgga agccgctgtc ggggagccgg cggtagggct ggacgcaggt gcaactgaca 180
tgggtgaacc ccagggatcc atgcggtatc tagtgacagg gggctctggg ctggtaggca 240
aagccatcca gaagggtgga gcagatggag ctggacttcc tggagaggac tgggtgtttg 300
tctcctctaa agacgccgat ctacaggata cagcacagac ccgcgccctg tttgagaagg 360
tccaaccac acacgtcatc catcttgctg caatgggtgg gggcctgttc cggaatatca 420
aatacaattt ggacttctgg aggaaaaacg tgcacatgaa cgacaacgtc ctgcactcgg 480
ccttcgaggt gggcgccgc aagggtggtt cctgcctgtc cacctgtatc ttccctgaca 540
agacgacctt cccgatagat gagaccatga tccacaatgg gcctccccac aacagcaatt 600
ttgggtactc gtatgccaag aggatgatcg acgtgcagaa cagggcctac ttccagcagt 660
acggctgcac cttcacggct gtcatcccca ccaacgtctt cgggccccac gacaacttca 720
acatcgagga tggccacgtg ctgcctggcc tcatccacaa ggtgcacctg gccaaagagca 780
gcggctcggc cctgacgggtg tggggtacag ggaatccgcg gaggcagttc atatactcgc 840
tggacctggc ccagctcttt atctgggtcc tgcgggagta caatgaagtg gagcccatca 900
tcctctccgt gggcgaggaa gatgaggtct ccatcaagga ggcagccgag gcgggtggtgg 960
aggccatgga cttccatggg gaagtcaact ttgatacaac caagtccgat gggcagttta 1020
agaagacagc cagtaacagc aagctgagga cctacctgcc cgacttccgg ttcacaccct 1080
tcaagcaggc ggtgaaggag acctgtgctt ggttcaactga caactacgag caggccccga 1140

```

26

```

agtgaagctg gaagacagga tcaggtgcc gggaccatc ggctggcaga gcccagcggc 1200
caccacccgt caaccctgcc aggagctgag ggcaccaccc agcaacctgg gcctgcattc 1260
catccgctct gcagccccaa gcatcttttc agtggggccc ccattcacgt tggtcctcag 1320
ggaaaccagg gtccggggca ggcccgggc tttgctcccc acaccagccc cctgcgcgtg 1380
tccactctga tcctgcattc cactccctgg gagccaataa agtgcatttt cacaggcaaa 1440
aaaggggaag aaaacgacag ggggaggtag aaggagtagg aggagtga 1488

```

```

<210> 12
<211> 1757
<212> DNA
<213> Homo sapien

```

```

<400> 12
gactccaagt cccagctgtg cccgggaagc tgcgcgcccc cgggactcca tttcccagag 60
tgccccgccc cagcctcccc gcccccccc ccacctgget ccgcgggcag ccggagcgca 120
cccggccgga agccgctgtc ggggagccgg cgggtggggct ggacgcaggt gcaactgaca 180
tgggtgaacc ccagggatcc atgcggattc tagtgacagg gggctctggg ctggtaggca 240
aagccatcca gaaggtggta gcagatggag ctggacttcc tggagaggac tgggtgtttg 300
tctcctctaa agacgccgat ctacaggata cagcacagac ccgcgccctg ttlgagaagg 360
tccaacccac acacgtcatc catcttgctg caatggtggg gggcctgttc cggaatatca 420
aatacaatth ggacttctgg agggaaaaacg tgcacatgaa cgacaacgtc ctgcactcgg 480
ccttcgaggt gggcgccccg aaggtggtgt cctgcctgtc cacctgtatc ttccctgaca 540
agacgacctc cccgatagat gagaccatga tccacaatgg gcctccccac aacagcaatt 600
ttgggtactc gtatgccaag aggatgatcg acgtgcagaa cagggcctac ttccagcagt 660
acggctgcac ctaccacgtc gtcaccccca ccaacgtctt cgggccccac gacaacttca 720
acatcgagga tggccacgtg ctgcctggcc tcatccaca ggtgcacctg gccaaagagca 780
gcggctcggc cctgacggtg tggggtacag ggaatccgcg gaggcagttc atatactcgc 840
tggacctggc ccagctcttt atctgggtcc tgcgggagta caatgaagtg gagcccatca 900
tcctctccgt gggcgaggaa gatgaggtct ccatcaagga ggcagccgag gcggtggtgg 960
aggccatgga ctcccatggg gaagtcacct ttgatacaac caagtcggat gggcagttta 1020
agaagacagc cagtaacagc aagctgagga cctacctgcc cgacttccgg ttacaccct 1080
tcaagcaggc ggtgaaggag acctgtgctt ggttactga caactacgag caggcccgga 1140
agtgaagctg gaagacagga tcaggtgcc gggaccatc ggctggcaga gcccagcggc 1200
caccacccgt caaccctgcc aggagctgag ggcaccaccc agcaacctgg gcctgcattc 1260

```

catccgctct gcagcccaaa gcatctttcc agtggggccc ccattcacgt tggtcctcag 1320
 ggaaaccagg gtccggggca ggcccgggcg tttgctcccc acaccagccc cctgcgcgtg 1380
 tccactctga tcttgcattc cactccctgg gagccaataa agtgcatttt cacaggcaaa 1440
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaagggg gggggcgcca 1500
 aaagattccc cctcgggggg ggccgccaca atattatgcc gcagcagccc acggtgtttc 1560
 tgtgtgtgaa aaagaagggg gggccccaat aaaggggggc gcgtaataata tgaaccccg 1620
 acgagatggg cggccggcct taaaaaacg cggcgggtga gtggcgaaa aaacgcgtga 1680
 taccggggca aacctgggga gaagagacac ccccaaacac ggaggggggg agaccaatcg 1740
 ggggcaacac actacct 1757

<210> 13
 <211> 1869
 <212> DNA
 <213> Homo sapien

<400> 13
 gggagccgcg cgagccctgc gcagggcccc ctccccctag ggcctggcct ggggccctgc 60
 cgggggagcc cgagcaggtt tccggctccc aggatgggat ccttgagggt ggctgcgccc 120
 cgaggcctgt cctgccctgg aggaatctgg ctgccaggg ctctccagga ccagccagcc 180
 tcgagtgggc gtgggtgca cacaggcgcc gtctcgtgcc tgtccctagc atgcgggctt 240
 tagctgcgaa ccgtgttaac gacctgtgcc aggagccccc gtcccaaggt tgtctgcctc 300
 ccctcttgtc agtcagaggg gagtagaatg taccttttct cggcctagtg gggagtcgtg 360
 ggttgggacc agctgctctg ggctgggtgg tagctcagga cccctgcggc gctgtaggct 420
 gagagctccc aggggaacag ggctgcgacg agggagtgcc tcggtccagc tgggtctttc 480
 tgggtgccag tggactatgc ccactctga gggcctcact ctgtgccagt tgccacagaa 540
 gagtggggct ccaaaggatg agagcgtgat gacctcagcc tcccactgtt tgacattaca 600
 gtgcaactga catgggtgaa cccagggat ccatgcggat tctagtgaac gggggctctg 660
 ggctggtagg caaagccatc cagaagggtg tagcagatgg agctggactt cctggagagg 720
 actgggtgtt tgtctcctct aaagacgccc atctcacgga tacagcacag acccgcgccc 780
 tgtttgagaa ggtccaacc acacacgtca tccatcttgc tgcaatggtg gggggcctgt 840
 tccggaatat caaatacaat ttggacttct ggaggaaaaa cgtgcacatg aacgacaacg 900
 tcttgcactc ggccttcgag gtgggcgccc gcaagggtgt gtctgcctg tccacctgta 960
 tcttccctga caagacgacc taccgatag atgagacat gatccacaat gggcctcccc 1020
 acaacagcaa ttttgggtac tcgtatgcca agaggatgat cgacgtgcag aacagggcct 1080

acttccagca gtacggctgc accttcaccg ctgtcatccc caccaacgtc ttcgggcccc 1140
 acgacaactt caacatcgag gatggccacg tgctgcctgg cctcatccac aaggtgcacc 1200
 tggccaagag cagcggctcg gccctgacgg tgtggggtac aggggaatccg cggaggcagt 1260
 tcatatactc gctggacctg gccagctct ttatctgggt cctgcgggag tacaatgaag 1320
 tggagcccat catcctctcc gtgggcgagg aagatgasgt ctccatcaag gaggcagccg 1380
 aggcgggtgt ggaggccatg gacttccatg gggaagtcac ctttgatata accaagtcgg 1440
 atgggcagtt taagaagaca gccagtaaca gcaagctgag gacctacctg cccgacttcc 1500
 ggttcacacc cttcaagcag gcggtgaagg agacctgtgc ttgggttact gacaactacg 1560
 agcaggcccc gaagtgaagc tgggaagacag gatcagggtgc cagcggacca tcggctggca 1620
 gagcccagcg gccaccaccc gtcaaccctg ccaggagctg agggcaccac ccagcaacct 1680
 gggcctgcat tccatccgct ctgcagcccc aagcatcttt ccagtggggc ccccatcac 1740
 gttggtcctc agggaaacca ggggtccggg caggcccggc gctttgctcc ccacaccagc 1800
 cccctgcgcg tgtccactct gatcctgcat cccactccct gggagccaat aaagtgcatt 1860
 ttcacaggc 1869

<210> 14
 <211> 1602
 <212> DNA
 <213> Homo sapien

<400> 14
 gactccaagt cccagctgtg cccgggacgc tgcgcgcccc cgggactcca tttcccagag 60
 tgccccgccc cagcctcccg gccccgcccc ccacctgggt ccgcgggcag ccggagcgca 120
 cccggccgga agccgctgtc ggggagccgg cgggtggggt ggacgcagggt gcaactgaca 180
 tgggtgaacc ccagggatcc atgcggattc tagtgacagg gggctctggg ctggtaggca 240
 aagccatcca gaaggtggta gcagatggag ctggacttcc tggagaggac tgggtgtttg 300
 tctcctctaa agacgccgat ctacacgata cagcacagac ccgcgccctg tttgagaagg 360
 tccaacccac acacgtcatc catcttgctg caatgggtgg gggcctgttc cggaatatca 420
 aatacaatct ggacttctgg aggaaaaacg tgcacatgaa cgacaacgtc ctgcactcgg 480
 ccttcgagggt gggcgcggcg aaggtgggtgt cctgcctgtc cacctgtatc ttccctgaca 540
 agacgacctc cccgatagat gagaccatga tccacaatgg gcctccccac aacagcaatt 600
 ttgggtactc gtatgccaaag aggatgatcg acgtgcagaa caggctcctg cgcccatcct 660
 gctgaggccc agccaggagt cggggagagg gccccaggg gcgggtgggg ccggctggtc 720
 ggtctctcgt gccagcctca gtaagaggcc agcggcagcc tggggtggga tcgcggggcc 780

aggacgaggg caggagacgc tgtgcctcgg cctacttcca gcagtacggc tgcaccttca 840
 ccgctgtcat cccaccaac gtcttcgggc cccacgacaa cttcaacatc gaggatggcc 900
 acgtgctgcc tggcctcatc cacaaggtgc acctggccaa gagcagcggc tcggccctga 960
 cgggtgtgggg tacaggggaat ccgcggaggc agttcatata ctcgctggac ctggcccagc 1020
 tctttatctg ggtcctgcgg gagtacaatg aagtggagcc catcatcctc tccgtgggcg 1080
 aggaagatga ggtctccatc aaggaggcag ccgaggcggc ggtggaggcc atggacttcc 1140
 atgggggaagt cacctttgat acaaccaagt cggatgggca gtttaagaag acagccagta 1200
 acagcaagct gaggacctac ctgcccgaact tccgggtcac acccttcaag caggcgggtga 1260
 aggagacctg tgcttggttc actgacaact acgascaggc ccggaagtga agctggaaga 1320
 caggatcagg tgccagcggc ccatcggtcg gcagagccca gcggccacca cccgtcaacc 1380
 ctgccaggag ctgagggcac caccagcaa cctgggcctg cattccatcc gctctgcagc 1440
 cccaagcatc ttccagtggt ggccccatt cacgttggtc ctcaggaaa ccagggtccg 1500
 gggcaggccc ggcgctttgc tccccacacc agccccctgc gcgtgtccac tctgacctg 1560
 catccactc cctgggagcc aataaagtgc attttcacag gc 1602

<210> 15
 <211> 1693
 <212> DNA
 <213> Homo sapien

<400> 15
 gactccaagt cccagctgtg cccgggacgc tgcgcgcccc cgggactcca tttcccagag 60
 tgccccgccc cagcctcccc gccccgcccc ccacctggct ccgcgggcag ccggagcgca 120
 cccggccgga agccgctgtc ggggagccgg cggtggggct ggacgcaggt gcaactgaca 180
 tgggtgaacc ccagggatcc atgcggatcc tagtgacagg gggctctggg ctggtaggca 240
 aagccatcca gaagggtgta gcagatggag ctggacttcc tggagaggac tgggtgtttg 300
 tctcctctaa agacgccgat ctacaggata cagcacagac ccgcgccttg tttgagaagg 360
 tccaacccac acacgtcatc catcttgctg caatgggtggg gggcctgttc cggaatatca 420
 aatacaattt ggacttctgg aggaaaaacg tgcacatgaa cgacaacgtc ctgcactcgg 480
 ccttcgaggt gggcgcccg cagggtggtgt cctgcctgtc cacctgtatc ttccctgaca 540
 agacgacctc cccgatagat gagaccatga tccacaatgg gcctccccac aacagcaatt 600
 ttgggtactc gtatgccaag aggatgatcg acgtgcagaa caggctcctg cgcccatcct 660
 gctgaggccc agccaggagt cggggagagg gcccccaggg gcgggtgggg ccggctggtc 720
 gggctctcgt gccagcctca gtaagaggcc agcggcagcc tgggggtggga tcgcgggccc 780

30

```

aggacgaggg caggagacgc tgtgcctcgg cctacttcca gcagtacggc tgcaccttca      840
ccgctgtcat ccccaaccaac gtcttcgggc cccacgacaa cttcaacatc gaggatggcc      900
acgtgctgcc tggcctcatc cacaagggtc acctggccaa gagtgagtg ctcctgccga      960
tgggggtgcc gggctcagct cgggaggagg tgaccacagt cctctgacac ctgctccttc     1020
cccaaattct caggcagcgg ctccggccctg acgggtgtgg gtacagggaa tccgcggagg     1080
cagttcatat actcgctgga cctggcccag ctctttatct gggtcctgcg ggagtacaat     1140
gaagtggagc ccatcatcct ctccgtgggc gaggaagatg aggtctccat caaggaggca     1200
gccgaggcgg tgggtggagg catggacttc catggggaag tcacctttga tacaaccaag     1260
tcggatgggc agtttaagaa gacagccagt aacagcaagc tgaggacct cctgcccagc     1320
ttccggttca cacccttcaa gcaggcgggtg aaggagacct gtgcttgggt cactgacaac     1380
tacgagcagg cccggaagtg aagctggaag acaggatcag gtgccagcgg accatcggct     1440
ggcagagccc agcgccacc acccgtaaac cctgccagga gctgagggca ccaccagca     1500
acctgggcct gcattccatc cgctctgcag cccaagcat ctttccagt gggcccccac     1560
tcacgttggc cctcagggaa accagggctc ggggcaggcc cggcgctttg ctccccacac     1620
cagccccctg cgcggtgtcca ctctgaccc gcattccact cctggggagc caataaagt     1680
cattttcaca ggc

```

```

<210> 16
<211> 2040
<212> DNA
<213> Homo sapien

```

```

<400> 16
gactccaagt cccagctgtg cccgggacgc tgcgcgcccc cgggactcca tttcccagag      60
tgccccgccc cagcctcccg gcccgcgcc ccacctggct ccgcgggcag ccggagcgca     120
cccggccgga agccgctgtc ggggagccgg cgggtggggc ggacgcaggt gcaactgaca     180
tgggtgaacc ccagggatcc atgcggatc tagtgacagg gggctctggg ctggtaggca     240
aagccatcca gaagggtgta gcagatggag ctggacttcc tggagaggac tgggtgtttg     300
tctcctctaa agacgccgat ctacggata cagcacagac ccgcgccctg tttgagaagg     360
tccaaccac acacgtcatc catcttgctg caatgggtgg gggcctgttc cggaatatca     420
aatacaattt ggaacttctg aggaaaaacg tgcacatgaa cgacaacgtc ctgcactcgg     480
ccttcgaggt gggcgcccg cagggtgggt cctgcctgtc cacctgtatc ttccctgaca     540
agacgacct cccgatagat gagaccatga tccacaatgg gcctccccac aacagcaatt     600
ttgggtactc gtatgccaa gaggatgatc acgtgcagaa cagggcctac ttccagcagt     660

```

acggctgcac cttcaccgct gtcattcccca ccaacgtctt cgggccccac gacaacttca 720
 acatcgagga tggccacgtg ctgcctggcc tcatccacaa ggtgcacctg gccaaagagca 780
 gcggctcgsc cctgacggtg tggggtacag ggaatccgag gaggcagttc atatactcgc 840
 tggacctggc ccagctcttt atctgggtcc tgcgggagta caatgaagtg gagcccatca 900
 tcctctccgg tgggtacctc agccctcagc ccccttctc catggtagga caggatccaa 960
 ggctgtcctg ggaggctggc tgaggggtgg gagcaggaat attcatgggc cgtcgggtgg 1020
 caccaagggg aggcctgacc cgggtggctc ccacatgggc gaggaagatg aggtctccat 1080
 caaggaggca gccgaggcgg tgggtggagg catggaactc catggggaag tcaccgtatc 1140
 ctctggctcc agtgctgggg gttgggcggg ggccccctgg gcgggctcag tggccacccg 1200
 gtgtagggcc agcgtgggtg gacactgag gagggaggat gctcaccctg gcaggcggag 1260
 gagctctgct gtggctcccc tgggaatggc agaggttcaa gggcaagctg cgggggctgg 1320
 ggtggaggtg ctcttctcgc tgtggccttg acaaagcctc catttgatac aaccaagtcg 1380
 gatgggcagt ttaagaagac agccagttaac agtaagctga ggacctacct gcccgacttc 1440
 cggttcacac ccttcaagca ggggtgagcc tgacccacac gccctccact tgggtggaggc 1500
 ctgccccagc cctccctca tgcctgctac cagggcagag gtgagggtgcc cctcagagc 1560
 ctgtactgcc ctggagggtg gacaccaaag ctctgagggg tgacttccct gtccctgggc 1620
 ctctccccc cacttcctcc catgcggccc cgacccctcc tgtccatggc cctcacctgc 1680
 ctgcctctgc agcgggtgaag gagacctgtg cttgggtcac tgacaactac gagcaggccc 1740
 ggaagtgaag ctggaagaca ggatcagggt ccagcggacc atcggctggc agagcccagc 1800
 ggccaccacc cgtcaacct gccaggagct gagggcacca cccagcaacc tgggcctgca 1860
 ttccatccgc tctgcagccc caagcatctt tccagtgggg ccccatcca cgttggtcct 1920
 cagggaacc agggctcggg gcaggcccgg cgctttgtc cccacaccag cccctgctc 1980
 gtgtccactc tgatcctgca tccactccc tgggagccaa taaagtgcatt ttccacaggc 2040

<210> 17
 <211> 2481
 <212> DNA
 <213> Homo sapien

<400> 17
 cggccagcgc agccccggcc gctgggcgca cccgtcccgt tcgtccccgg acgttgctct 60
 ctacccccggg aacgtcgaga ctggagcgcc cgaactgagc caccttcgag gacccccaga 120
 gcggcggcgc gactcaccgc ggaggcgccc ggacgcgtca agtgcgact ttcaaccgta 180
 aatgggtgct gagcgtttag ggggtcgggg caactcccta actcgtgggg ccctggccgg 240

ccctgccgcg gcgtccgaga ccttctgata cctcgctgcg cgcggcgcg gggtggcgac 300
 ttgggctcag gggcggcggg gcgsggaggt gccttgacct agggacccag aggccgggag 360
 caagtctcct ttgccttgg actgcagtgt cccccagggc aaggcctgaa ccaggtcgcg 420
 agggctctgt tcccgtctgg ggagctgaac tgcccagagac actgtcgcag tcgcggggac 480
 ttgtctggag cggcgggggtc tgagcccaag tcggaagccg ccgccgccgc cagcgtcccg 540
 tgcgcctgcc gccccgggac cagccgcgaa acttcttctc gggacggaga cagcgtctgc 600
 cgcccgggcc gaggtaggag ctggctgggc tcggtagagc gcgggcgaat cgctttcggc 660
 agcgaaggaa cgtgtcggga gaagccaact gcaggaccag gcccagcgg gcgcgcagag 720
 acgcctgcct tgggcgggag tccccccctc cggttttcgt ggctctggta gggccctctg 780
 tcccgtgagc tcctcactgg acctgaggct acaggcttca gcaggctcaag cggccgagtg 840
 tgcctggagg attggcggcg gggtggcatg agaaggctgg ccctcttctc catctcccag 900
 tcaggcgatt tctctgctgt ctggggcagg ggcgcacacc ccaggaaact actacgtaga 960
 gggaagccag cctggtctct cccctctgcg tcagtgtctc taagctgccc ctaccactc 1020
 tgggtagggg tctttcagggt gggctagggg attctccttg gaagtccctc tgtttgctcc 1080
 cctccatcag ggcacctctg agttagccaa tcatcctctt ttctggcctc ttttttgcgg 1140
 ggaggagagt agagagagaa gcctcctact cggcaggctc ctgagaggag gtttgggggg 1200
 gcttctgagg ttgctcctcc tgggcagagt caaggggtgt tgagggttcc aacttttact 1260
 ggacaatctc tcaagctctg attccctgat ttctgggagg tgtcagtgtg gggcttgtgt 1320
 cctgccccac ccacacagca tttgggtgcag gcacatggga tgggtcccca agcccttttc 1380
 ccacagttag tttcagaaaa tgcataagcc acctaaaggct gggagagcct ttctgtgctg 1440
 gctgagatct ggtggcatgt gcatgcatac gtgtgcaagt gtgtgtgtgt gtgtgcaagt 1500
 gtgtgtgcgc atgtgcatgt gtgtggaaaag tatggctctg gtggctgtaa gactggcccc 1560
 tcttgtcccc tctgcaggcc cagcccaata ggaagcacct gatccacact ctttctagcc 1620
 ccagggatgc tcaggaaagc agcctttctt tagggctgtc atctgttctg gggatctgtt 1680
 gctgtttctt gggcccacag aatacactcc acacctcggg actccataat attggacaag 1740
 gctggaaggc ccatttggct cctgcagcct ctatgcagg tgaggacaga cccaaggctc 1800
 aggcaatgct ggccttttga acacagaacc tggctcactg actccactc cagttgtctt 1860
 ttcctctctc ctctggagca accctctctc ctccagagca acccctgtcc ctccctccta 1920
 cctctctcta gggctgcacc ccagctcac cttagacctg gcccttccta cctgttgccc 1980
 ctactgtctt gtcccatccc agtggtcagg agggagagta ctggccaaag gccagctcc 2040

33

```

acctgtgact taggggagtg ccaggcatca cccagaggtc ccggccctcg ggggcctggc 2100
aggctctgct gtgggggaag cagagttaga actggggctg cttctccact ggccgtttgt 2160
ctctgtcccc tccactggcc tcttgaagca cagagaccct ccgggtactt tccttctct 2220
gggcttccac tcatgctatt cctgctccc tttttctacc tggagacccc cattcctagt 2280
catcctcttc agcggtcctc ccagagctgt cctcagcatg gcagcctcca cagccctgg 2340
gtgtcacccc cggtttcgtg tctgctcgg actccagacc tgccctccc aggctggccc 2400
agatggatcc tctacagtga ctaacccaaa ccagcaccag gcagggaccc aataaacctt 2460
tgtgaatgga aaaaaaaaaa a 2481

```

```

<210> 18
<211> 2127
<212> DNA
<213> Homo sapien

```

```

<400> 18
aaagggttcg ccgatcttgg ggagccacac agcccgggtc gcaggcacct ccccgccagc 60
tctcccgtt ctcgcacagc ttcccagcgc gtctgctgag ccccatggcc cagccacgc 120
tctccgccc cccagcaat ccccggtcc tgcgggtggc gctgctgctc ctgctcctgg 180
tggccgccc cggcgcgca gcagggtgggt cccggcgccc tggggtcccc gggccggacg 240
cggctggggg gggcgcccc gcgcgacagc cccgctcaat cagcgagtct attcttccct 300
aggagcgtcc gtggtcactg aactgcgctg ccagtgcctt cagacactgc aggggaattca 360
cctcaagaac atccaaagtg tgaatgtaag gtcccccgga cccactgcg cccaaaccga 420
agtcatgtaa gtcccgcccc gcgcttccgc tgccaccgct ggggtcccc actctccgc 480
tgcccaacc ctgtcccag cccgacctcc tgtctcagcg aattcccttc tctctgcaga 540
gccacactca agaatgggaa gaaagcttgt ctcaacccc catcccccat gggtcagaaa 600
atcatcgaaa agatactgaa caagtgagtt gtaatttcca tatacacagg cgactggagc 660
cgttgggtcag aaatactggc atctgcccc taaaaataaa atcagggaac cccaagagtt 720
agctgaagga ctagaaattg tgattattat ttccacaatt aaagttgcc ttaaggttat 780
taatctgctc tggtgccaga ggatatttca gtatttcagt gtcttccatt tccaggccta 840
accctggga gggtaaatgt gggtttctag aatactaagt aaatttgact aacaatgcca 900
aaatgcccc tgctgtttt gggacgttta cctcagtcct taatgggctt cagacctgaa 960
aaatgcaatg tctggtttgg gcactttggg cctgtaagcc ttcttgggta agagcagaaa 1020
ctttgcagta acaccttcag tgagttcaag gctaggatcc ctgtcaacat tatttaattct 1080
ctttgagctt tagcaaaata gggtagataa tggtagttat ttcatagggt tgtgtgcagc 1140

```

34

ttaagggaga tcatgaatgg acattttctaa cccaatgtga caatcagtga ccaatatgtt 1200
 ttggcttttt caaaccaaga atctagttga gtccacagcc acttctttct tgaaaaaaaa 1260
 aaaaaaaagc attcaggagt gcaagttttc tgctatagaa ggcagtgggt acagacagac 1320
 cttccctgag tggagggtctg ggagagagtc tgcattggga catccctcca agcaacttca 1380
 gagtgacaga agagcagcct tccttagcac ctgcaacagt aacccttttc tcatcacagg 1440
 gggagcacca actgacagga gagaagtaag aagcttatca gcgtatcatt gacacttctc 1500
 gcagggtgggt ccctgcccct accagagctg aaaaatgaaa agagaacagc agctttctag 1560
 ggacagctgg aaaggactta atgtgtttga ctatttctta cgagggttct acttatattat 1620
 gtatttatatt ttgaaagctt gtattttaat attttacatg ctgttattta aagatgtgag 1680
 tgtgtttcat caaacatagc tcagtcctga ttatttaatt ggaatatgat gggtttttaa 1740
 tgtgtcatta aactaatatt tagtgggaga ccataatgtg tcagccacct tgataaatga 1800
 cagggtgggg aactggaggg tggggggatt gaaatgcaag caattagtgg atcactgtta 1860
 gggtaaggga atgtatgtac acatctattt ttatacttt ttttttaaaa aaagaatgtc 1920
 agttgttatt tattcaaatt atctcacatt atgtgttcaa catttttatg ctgaagtttc 1980
 ccttagacat tttatgtctt gcttgtaggg cataatgcct tgtttaatgt ccattctgca 2040
 gcgtttctct tcccttgga aaagagaatt tatcattact gttacatttg taaaaatgac 2100
 atgataataa aagttttatg aaaaaaa 2127

<210> 19
 <211> 4323
 <212> DNA
 <213> Homo sapien

<400> 19
 gggacgtccg tggtccttgt cgcacgtcgc agcgcctggc gcccgsgaag aggtgggtgt 60
 gaggcagacg aactcgcggc tctccggctt ccgaggcttc cgagtgtcg gaggaagggg 120
 gcggcgagca ataagaaccc gccgcacccg gtcctcagcg actcttctga cctccgcgcg 180
 acgtacccgc cgccgccgtt ggctggagca tttgacattg tgcagcaaag aaatgggtat 240
 ggagaagccc agtccgctgc ttgtaggcg ggagtgtgtg aggcaatatt atactttgct 300
 gaataaagct ccggaatatt tacacagggt ttatggcagg aattcttct atgttcatgg 360
 tggagtagat gctagtggaa agccccagga agctgtttat ggccaaaatg atatacacca 420
 caaagtatta tctctgaact tcagtgaatg tcatactaaa attcgtcatg tggatgtc 480
 tgcaaccttg agtgatggag tagttgtcca ggtcatgggt ttgctgtcta acagtggaca 540
 accagaaaga aagtttatgc aaacctttgt tctggctcct gaaggatctg ttccaaataa 600

attttatggt cacaatgata tgtttcgta tgaagatgaa gtgttatggt gattctgagc	660
ctgaacttga tgaagaatca gaagatgaag tagaagagga acaagaagaa agacaacccat	720
ctcctgaacc tgtgcaagaa aatgctaaca gtggttacta tgaagctcac cctgtgacta	780
atggcataga ggagcctttg gaagaatcct ctcatagaacc tgaacctgag ccagaatctg	840
aaacaaagac tgaagagctg aaaccacaag tggaggagaa gaacttagaa gaactagagg	900
agaaatctac tactcctcct ccggcagAAC ctgtttctct gccacaagaa ccaccaaagg	960
ctttctcctg ggcttcagtg accagtaaaa acctgcctcc tagtgggtact gtttcttctt	1020
ctggaattcc accccatggt aaagcaccag tctcacagcc aagagtcgaa gctaaaccag	1080
aagttcaatc tcagccacct cgtgtgcgtg aacaacgacc tagagaacga cctgggtttc	1140
ctcctagagg accaagacca ggcagaggag atatggaaca gaatgactct gacaaccgta	1200
gaataattcg ctatccagat agtcataaac tttttgttg taacttgcca catgatattg	1260
atgaaaatga gctaaaggaa ttcttcatga gttttggaaa cgttgttgaa cttcgcatca	1320
ataccaagggt tgttggggga aagcttccaa attttgggtt tgtgggtttt gatgactctg	1380
aaccagttca gagaatctta attgcaaaac cgattatggt tcgaggggaa gtacgtttaa	1440
atgtggaaga gaaaaaaaca agagctgcaa gagagcgaga aaccagaggt ggtgggtgatg	1500
atcgaggga tattaggcgc aatgatcgag gtcccggtgg tccacgtgga attgtgggtg	1560
gtggaatgat gcgtgatcgt gatggaagag gacctcctcc aaggggtggc atggcacaga	1620
aacttggtc tggagagga accgggcaaa tggagggccg cttcacagga cagcgtcgct	1680
gaagctccac tgttggcaaa gtcttggcag tggtagatta ttcacgtgt ttgcattctt	1740
gttaattttt tttttggctt tggaaatgta cacagccttt ttgatcattt ctttgatgtg	1800
aaaagcatct ttggttatca gttaaattga ggtggacatt atttcccaa tttcacaaca	1860
ggattcacat tgttaattta taaatctaga cttggagaat taaggactga gaaatgacca	1920
tatcttaaac tatctacgac aaagtgaact taaaaggaca tgccactga attcaggtcc	1980
tttgagtaaa aaaaaaatct tctgctgcac attttgttta agtggtactg tttctgctg	2040
ttaatgctgg gaacacaaat agtgcaattt gtgcaattgg agaattctgc cttttttctt	2100
ggctcccccc aaaaatacaa accaacagaa acttgttatg cactcatcaa aatgtactaa	2160
tgggtactct gaactcatta acattgacat ctgcaacagg aggcaacagg gaaaaaatct	2220
catcttcttt tccagtagaa aatagtttgt gaaatgatga gggcatttta tctgcttgct	2280
gtgaccagcg tgtgtacaca taaaccttaa caagactaca agtatattcc agaaggaaat	2340
catttttagtt atgaactaaa taataaaaaat tagaacttca aatgcgatgg tcttgactat	2400
tagaccagat ttagtagctc catatctaag atttttctac ctgcccctct tcagtacagg	2460

gatggctggc	tgctcaacac	actcctcctc	cccttttttc	ctttctttaa	gctgtgtaca	2520
gtgaaaattg	tctttactgt	atttttgttc	tctggtaatg	taataagcat	gatggcgcct	2580
tctattaata	catcattcca	gtcttgctgg	taattttgta	cagtatagtg	tatgaattgc	2640
tgtgctgcaa	agccaaacag	ctgcaaaatg	ttgaaaaatc	atcgaaatgt	ataaaaattg	2700
cagtatcttt	aaaatcagta	aaatggacta	gcatattatt	tatcttgttc	ttcagttaac	2760
aacttttgtt	tctctgtggg	agggagggag	tctctgtgtt	ttgtggggag	aggggaaggag	2820
gaagtcagtt	atttgagtaa	gcctctagtt	gactttttct	ttagcctgaa	tgtggacgtt	2880
gaaacatatc	acttcagggc	ttggaaaagt	cagtcaactt	gacgtacatt	tttagtgaca	2940
ttttaaaagc	agtcagattc	tataaatggc	aagtaagcct	gaagtgagga	tactgcaatt	3000
ttcggagaaa	agaacagcag	ctctttaagt	gtctgcattt	tctatttggg	gggcagggaa	3060
ctgtcattca	ttttgcacaa	ttcttgaact	gatgtcagca	cccgagtggc	tcctgaattt	3120
aagtctggga	cgacatcttt	tatttttaca	tgaatcttta	aacaattctg	tgagcaaagt	3180
ttgtagctgc	tggattattg	tctgtcttta	tagcaagttc	cagtaaacca	caagtatggc	3240
aaagcttatc	caattttatg	cttggagcag	tcagtacata	ccagtttctg	atgtttcagg	3300
caggagtggg	gtaaataagt	gtgaccactt	aaagctgctc	gttagcatgg	aagacttctc	3360
cattctatct	ttgtaaaaca	gacaagatat	gcacttgaca	tagtagcaaa	ttggttctga	3420
attatgcaac	tgttttgctat	ttagtaaact	agcaaagtat	gcatgtattt	tgtttttcat	3480
gtactgggca	atatgagtaa	aatctgtccc	tttttcccc	tttgaatgag	gtcttccatg	3540
tttgagggaa	agtcttgcac	tattgcatat	attttgggga	cacagatttt	catagtttcc	3600
atttttgggg	ggcttaagga	tttttttttt	ttctgtttga	aacagtttta	tactttctga	3660
tatagtactt	gaaattctta	ccagaaaatt	actttggagt	tttgaagcct	ttatttaatac	3720
tacttttaaa	gaagcagttg	ttttattgtc	aatgtttttt	ttcccccaag	catattttct	3780
tgtattttctg	tttccatata	tatatatata	tataatttcc	aattcaggat	attgccctgc	3840
catccatgaa	aactgttctg	gcacaaaaag	taatgacaaa	tgttaagtgt	aataatagaa	3900
aagtagagca	aagagccatt	cagcttcagt	ctttacatac	catgaataaa	acattaaaac	3960
atcatatgga	gaagtttaca	tggtgattgt	tcacctgcag	tactgtggag	ttttaacatt	4020
ttgtccctctt	ttcagtgaaa	cagagtaaaa	atattcatct	accattactg	ttatttgctg	4080
attttgtttt	attttttgat	ggtaatatc	tatccttatg	acactattgc	aaccaaattg	4140
gctttaccat	cttggcttta	gtaggtatag	aagacaatgg	attaccatct	ttattgctgt	4200
aatgtgttaa	gcattatatg	ctagtagaat	ctagttaaat	tgtttcagggt	ggaaagtatt	4260

37

ctttgagttt ccatattgaa tgtgtttgga ctaaacaac aataaactac tgatgtctgc 4320
agc 4323

<210> 20
<211> 3590
<212> DNA
<213> Homo sapien

<400> 20
gactgggagg mamagagagt cagcttctgc tggcttccca atcagaagat gaagtagaag 60
aggaacaaga agaaagacaa ccatctcctg aacctgtgca agaaaatgct aacagtgggt 120
actatgaagc tcaccctgtg actaatggca tagaggagcc tttggaagaa tcctctcatg 180
aacctgaacc tgagccagaa tctgaaacaa agactgaaga gctgaaacca caagtggagg 240
agaagaactt agaagaacta gaggagaaat ctactactcc tcctccggca gaacctgttt 300
ctctgccaca agaaccacca aagccaagag tcgaagctaa accagaagtt caatctcagc 360
cacctcgtgt gcgtgaacaa cgacctagag aacgacctgg ttttccctct agaggaccaa 420
gaccaggcag aggagatatg gaacagaatg actctgacaa ccgtagaata attcgcctatc 480
cagatagtca tcaacttttt gttggtaact tgccacatga tattgatgaa aatgagctaa 540
aggaattctt catgagtttt ggaaacgttg tggaaacttcg catcaatacc aagggtgttg 600
ggggaaagct tccaaatttt ggttttgttg tttttgatga ctctgaacca gttcagagaa 660
tcttaattgc aaaaccgatt atgtttcgag gggaagtacg tttaaatgtg gaagagaaaa 720
aaacaagagc tgcaagagag cgagaaacca gaggtggtgg tgatgatcgc agggatatta 780
ggcgcaatga tcgagggtccc ggtggtccac gtggaattgt ggggtggtgga atgatgcgtg 840
atcgtgatgg aagaggacct cctccaaggg gtggcatggc acagaaactt ggctctggaa 900
gaggaaccgg gcaaattggag ggccgcttca caggacagcg tcgctgaagc tccactgttg 960
gcaaagtctt ggcagtggta cattattcat cgtgtttgca ttcttggtta tttttttttt 1020
ggctttggaa tgtgacacag cctttttgat catttctttg atgtgaaaag catctttggt 1080
tatcagttaa attgaggtgg acattatttc cccaatttca caacaggatt cacattgtta 1140
atttataaat ctagacttgg agaattaagg actgagaaat gaccatatct taaactatct 1200
acgacaaagt gaacttaaaa ggacatgcc actgaattca ggtcctttga gtaaaaaaaaa 1260
aatcttctgc tgcacatttt gtttaagtgt tactgtttct gcctgttaat gctgggaaca 1320
caaatagtgc aatttgtgca attggagaat cttgcctttt ttcttggtc cccccaaaaa 1380
tacaaaccaa cagaaacttg ttatgcactc atcaaatgt actaatgggt actctgaact 1440
cattaacatt gacatctgca acaggaggca acagggaaaa aatctcatct tcttttccag 1500

38

tagaaaaatag tttgtgaaat gatgagggca ttttatctgc ttgctgtgac cagcgtgtgt	1560
acacataaac cttaacaaga ctacaagtat attccagaag gaaatcattt tagttatgaa	1620
ctaaataata aaaattagaa cttcaaatgc gatggctcttg actattagac cagatttagt	1680
agctccatat ctaagatttt tctacctgcc cctcttcagt acagggatgg ctggctgctc	1740
aacacactcc tccccccctt ttttcctttc tttaagctgt gtacagtga aattgtcttt	1800
actgtatttt tgttctctgg taatgtaata agcatgatgg tgccttctat taatacatca	1860
ttccagtctt gctggtaatt ttgtacagta tagtgatga attgctgtgc tgcaaagcca	1920
aacagctgca aaatgttgaa aaatcatcga aatgtataaa aattgcagta tctttaaatt	1980
cagtaaaatg gactagcata ttatttatct tgttcttcag ttaacaactt tgtgttctct	2040
gtgggagggga gggagtcctg tgtgtttgtg gggagagggga aggaggaagt cagttatttg	2100
agtaagcctc tagttgactt ttctcttagc ctgaatgtgg acgttgaaac atatcacttc	2160
agggtctgga aaagtcatgc aacttgacgt acatttttag tgacatttta aaagcagtca	2220
gattctataa atggcaagta agcctgaagt gaggatactg caattttcgg agaaaagaac	2280
agcagctctt taagtgtttg cattttctat ttggggggca gggaaactgt attcattttg	2340
cacaattctt gaactgatgt cagcacccga gtggctcctg aatttaagtc tgggacgaca	2400
tcttttatat ttacatgaat ctttaaacaa ttctgtgagc aaagtttgta gctgctggat	2460
tattgtctgt ctttatagca agttccagta aaccacaagt atggcaaagc ttatccaatt	2520
ttatgcttgg agcagtcagt acataccagt ttctgatgtt tcaggcagga gtggggtaaa	2580
taagtgtgac cacttaaagc tgctcgttag catggaagac ttctccattc tatctttgta	2640
aaacagacaa gatatgcact tgacatagta gcaaatgggt tctgaattat gcaactgttt	2700
gctatttagt aaactagcaa atgatgcatg tattttgttt ttcatgtact gggcaatatg	2760
agtaaaatct gtcccttttt ccccttttga atgaggtctt ccatgtttga gggaaagtct	2820
tgcactattg catatatattt ggggacacag attttcatag ttccattttt tggggggctt	2880
aaggattttt tttttttctg ttgtgaaacag ttttatactt tctgatatag tacttgaaat	2940
tcttaccaga aaattacttt ggagttttga agcctttatt aatactactt ttaaagaagc	3000
agttgtttta ttgtcaatgt tttttttccc ccaagcatat ttctctgtat ttctgtttcc	3060
atatatatat atatataata atttccaatt caggatatatg ccttgccatc catgaaaact	3120
gttctggcac caaaagtaat gacaaatgtt aagtgttaata atagaaaagt agagcaaaga	3180
gccattcagc ttcagtcttt acataccatg aataaaacat taaaacatca tatggagaag	3240
tttaccatgg gattgttcac ctgcagtact gtggagtttt aacattttgt cctcttttca	3300
gtgaaacaga gtaaaaaat tcatctacca ttactgttat ttgctgattt tgttttatat	3360

tttgatggta atattctatc cttatgacac tattgcaacc aaattggctt taccatcttg 3420
 gctttagtag gtatagaaga caatggatta ccatctttat tgctgtaatg tgtaagcat 3480
 tatatgctag tagaatctag ttttaattggt tcaggtggaa agtattcttt gagtttccat 3540
 attgaatgtg tttggactaa acaacaata aactactgat gtctgcagca 3590

<210> 21
 <211> 3200
 <212> DNA
 <213> Homo sapien

<400> 21
 aggctgtcta gaggatccct cgggccacca agacaggcag aggagatatg gaacagaatg 60
 actctgacaa ccgtagaata attcgtctatc cagatagtca tcaacttttt gttggtaact 120
 tgccacatga tattgatgaa aatgagctaa aggaattctt catgagtttt ggaaacgttg 180
 tggaacttcg catcaatacc aagggtgttg ggggaaagct tccaaatttt ggttttgttg 240
 tttttgatga ctctgaacca gttcagagaa tcttaattgc aaaaccgatt atgtttcagag 300
 ggggaagtacg tttaaatgtg gaagagaaaa aaacaagagc tgcaagagag cgagaaacca 360
 gaggtggttg tgatgatcgc agggatatta ggcgcaatga tcgaggcccc ggtggtccac 420
 gtggaattgt ggggtggtga atgatgcgtg atcgtgatgg aagaggacct cctccaaggg 480
 gtggcatggc acagaaactt ggctctggaa gaggaaccgg gcaaattggag ggccgcttca 540
 caggacagcg tcgctgaagc tccactgttg gcaaagtctt ggcagtggta cattattcat 600
 cgtggttgca ttcttggtta tttttttttt ggctctggaa tgtgacacag cttttttgat 660
 catttctttg atgtgaaaag catctttggt tatcagttaa attgaggttg acattatttc 720
 cccaatttca caacaggatt cacattgtta atttataaat ctagacttgg agaattaagg 780
 actgagaaat gaccatatct taaactatct acgacaaaagt gaacttaaaa ggacatgccc 840
 actgaattca ggtcctttga gtaaaaaaaaa aatcttctgc tgcacatttt gtttaagtgt 900
 tactgtttct gcctgttaat gctgggaaca caaatagtgc aatttgtgca attggagaat 960
 cttgcctttt ttcttggtc cccccaaaaa tacaaccaa cagaaacttg ttatgcactc 1020
 atcaaaatgt actaatgggt actctgaact cattaacatt gacatctgca acaggaggca 1080
 acagggaaaa aatctcatct tcttttccag tagaaaaatg tttgtgaaat gatgagggca 1140
 ttttatctgc ttgctgtgac cagcgtgtgt acacataaac cttaacaaga ctacaagtat 1200
 attccagaag gaaatcattt tagttatgaa ctaaataata aaaattagaa cttcaaatgc 1260
 gatggtcttg actattagac cagatttagt agctccatat ctaagatttt tctacctgcc 1320
 cctcttcagt acagggatgg ctggctgctc aacacactcc tcctccctt ttttcctttc 1380

tttaagctgt gtacagtga aattgtcttt actgtatctt tgttctctgg taatgtaata 1440
agcatgatgg tgccttctat taatacatca ttccagctct gctggtaatt ttgtacagta 1500
tagtgtatga attgctgtgc tgcaaagcca aacagctgca aaatgttgaa aaatcatcga 1560
aatgtataaa aattgcagta tctttaaaat cagtaaaatg gactagcata ttatttatct 1620
tgttcttcag ttaacaactt tgtgttctct gtgggagsga gggagtcctg tgtgtttgtg 1680
gggagagsga aggaggaagt cagttatctg agtaagcctc tagttgactt ttctcttagc 1740
ctgaatgtgg acgttgaaac atatcacttc agggcttgga aaagtcagtc aacttgacgt 1800
acatttttag tgacatttta aaagcagtc gattctataa atggcaagta agcctgaagt 1860
gaggatactg caattttcgg agaaaagaac agcagctctt taagtgtttg cattttctat 1920
ttggggggca gggaaactgt attcattttg cacaattctt gaactgatgt cagcaccgga 1980
gtggctcctg aatttaagt tgggacgaca tcttttatct ttacatgaat ctttaaacaa 2040
ttctgtgagc aaagtgtgta gctgctggat tattgtctgt ctttatagca agttccagta 2100
aaccacaagt atggcaaagc ttatccaatt ttatgcttgg agcagtcagt acataccagt 2160
ttctgatgtt tcaggcagga gtggggtaaa taagtgtgac cacttaaagc tgctcgtag 2220
catggaagac ttctccattc tatctttgta aaacagacaa gatatgcact tgacatagta 2280
gcaaattggg tctgaattat gcaactgttt gctatttagt aaactagcaa atgatgcatg 2340
tattttgttt ttcatgtact gggcaatatg agtaaaatct gtcccttttt cccctttga 2400
atgaggctct ccatgtttga gggaaagtct tgcactatcg catatatctt ggggacacag 2460
attttcatag ttccatttt tggggggctt aaggattttt tttttttctg ttgaaacag 2520
ttttatactt tctgatatag tacttgaaat tcttaccaga aaattacttt ggagtttga 2580
agcctttatt aatactactt ttaaagaagc agtgttttta ttgtcaatgt tttttttccc 2640
ccaagcatat tttcttgat ttctgtttcc atatatatat atatatataa atttccaatt 2700
caggatattg ccctgccatc catgaaaact gttctggcac caaaagtaat gacaaatgtt 2760
aagtgaata atagaaaagt agagcaaaga gccattcagc ttcagtcctt acataccatg 2820
aataaaacat taaaacatca tatggagaag ttacatggt gattgttcac ctgcagtact 2880
gtggagtttt aacattttgt cctcttttca gtgaaacaga gtaaaaatat tcatctacca 2940
ttactgttat ttgctgattt tgttttatct tttgatggta atattctatc cttatgacac 3000
tattgcaacc aaattggctt taccatcttg gctttagtag gtatagaaga caatggatta 3060
ccatctttat tgctgtaatg tgttaagcat tatatgctag tagaatctag ttttaattgtt 3120
tcagggtgaa agtattcttt gagtttccat attgaatgtg tttggactaa acaaacaata 3180

41

aactactgat gtctgcagca

3200

<210> 22

<211> 627

<212> DNA

<213> Homo sapien

<400> 22

ggtaggctccc gagtaggctc agagcgaccg tggccgggcg gaagcggctt tctggcctaa 60

gctttaacag gcttcgcctg tgcttcctgt ttctctttt accaaggacc cgccaacatg 120

ggccgcgttc gcacaaaaac cgtgaagaag gcgcccgagg tcatcataga aaagtactac 180

acgcgcctgg gcaacgactt ccacacgaac aagcgcgtgt gcgaggagat cgccattatc 240

cccagcaaaa agctccgcaa caagatagca ggttacgtca cgcctctgat gaagcgaatt 300

cagagaggcc cagtaagagg tatctccatc aagctgcagg aggaggagag agaaaggaga 360

gacaattatg ttctgaggt ctcagccttg gatcaggaga ttattgaagt agatcctgac 420

actaaggaaa tgctgaagct tttggasttc ggagctctgt scaaccttca ggtcattcat 480

cccaactgta ggctgagtga cctgaagggt ggacagactg cagttgggat gaatttcaaa 540

acgcctcggg gacctgtttg aattttttct gtagtgctgt attattttca ataaatctgg 600

gacaacagca aaaaaaaaaa aaaaaaa 627

<210> 23

<211> 3187

<212> DNA

<213> Homo sapien

<400> 23

ttgctcgagc ggccggcgcc agtgtgctgg aaaggcgagg gcttcgttcg taaggaaggg 60

ggcctaggcc cgggcctgcg gtggtggggg ttgctcgcg cggggggtcg ctctgctgt 120

gtcttcgct ccagcttcgc ccacttcccc ttgccagcg ggtggggcgg gagaagacct 180

gccggagcca tggaggacga agtggtcgc tttgccaaga agatggacaa gatggtgcag 240

aagaagaagg tgagcgcgcc gagcggcgcg ggccgggagg gagccgggc cgcggtccgg 300

cccagggggg ccgtccctc cctcctctc cctccctcc cctgcagcc tcccgtctgg 360

gagccggggc cggcgcgccc gcgtcccg ggaggggtgc cggggccggg gcgtcgggtc 420

ccgcggcaac ctgcgttagg acccgctgc tcttgatatt ccagtcctg ctgcgtggtg 480

ccgtgtaata aacctaatcg atttagggat tagggcacgc tctccgttga ctttaaactt 540

tcgtgctagt aaaaccttgg catttagctt aggaattgma gcgtagaaag tcttcagaac 600

ttgaaagaat ggagtcctcc gtgatccgtg gccaacatct agaaagagca tcaaataagag 660

gcttgatgc ggtattagac atccggctgg taaaatgtaa aacttctgtg tcttattttt 720

gaagagggct gaacgtccgc ctggttatct caactgtgct acatgtttgc ttagcgatta	780
aaaacgcggc tggagcattg gatttgctaa aggagcttaa gaatatcct atgaccctgg	840
aattactgca gtccacaaga atcggaatgt cagttaatgc tattcgcaag cagagtacag	900
atgaggaagt tacatctttg gcaaagtctc tcatcaaac ctggaaaaa ttattagatg	960
ggccatcaac tgagaaagac cttgacgaaa agaagaaaga acctgcaatt acatcgaga	1020
acagccctga ggcaagagaa gaaagtactt ccagcggcaa tgtaagcaac agaaaggatg	1080
agacaaatgc tcgagatact tatgtttcat cctttcctcg ggcaccaagc acttctgatt	1140
ctgtgcgggt gaagtgtagg gagatgcttg ctgcagctct tcgaacaggg gatgactaca	1200
ttgcaattgg agctgatgag gaagaattag gatctcaaat tgaagaagct atatatcaag	1260
aaataaggaa tacagacatg aaatacaaaa atagagtacg aagtaggata tcaaatctta	1320
aagatgcaaa aaatccaaat ttaaggaaaa atgtcctctg tgggaatatt cctcctgact	1380
tatttgctag aatgacagca gaggaatgg ctagtgatga gctgaaagag atgcggaaaa	1440
acttgaccaa agaagccatc agagagcatc agatggccaa gactggtggg acccagactg	1500
acttgttcac atgtggcaaa tgtaaaaaa agaattgcac ttacacacag gtacaaaccc	1560
gtagtgtga tgaaccaatg acaacatttg ttgtctgtaa tgaatgtgga aatcgatgga	1620
agttctgttg agttggaaga attggcaaaa tatctggacc attaagaaaa cggattttgt	1680
aactagcttt aaactaggcc aagcaactag ttttcctgca aatcaaattt ttaaagcaac	1740
ttgggttaga ctttgttttt gacctaacat cccttcctta aatgccttct gtagtttcag	1800
atcagtaggg agaccatata ataattttat ggtacctgtt tcaaacata tttttctgt	1860
ttttataagt aagttgatat taattaaact cttggcaata tttcttctt cttaaaggaa	1920
aatatacctt aacttttttt cttttacact gtgaaacata cacagtagaa attctgttac	1980
tctctgttat taatacataa atgaaaatac atttttttcc atattggcat gtagctacaa	2040
atattaaagg aggagaaaag gtaatatat tttaggttta ccaaatatgg tgtgtattca	2100
aataatactt gaccagctta tctaaaatgt acataatttt gaggtagctt atgaatttga	2160
ttttaattat tatgttcaca agcttggaat attagatatt attttgcac tgtaactaac	2220
cgtgatcatc atttcttgta atttcttgta catgtatatt acttgttctt aatagatttt	2280
tggaacaag actttattga gatcagtttg gttttcctgt taatttacct gtttgacttt	2340
ataatgtgtt ttagttttgc agaagaacac tgttgtagtt tagaaggctt ttcataaatc	2400
ccctcatagg caaagatgaa aacttccac tattttttcc cctcttagg aagacatact	2460
ggaaagaaaa tgttttagcat cttagtgtag tatagctatt gtaaacagtt catgactaga	2520

43

```

ttttgattcg gaaatctata ctgaccaagg attaatctta aggattgtat aattcattaa 2580
agctgtgggc tttccatgtg gagactgata gaaaataatt ttgtcccaag tcttatttgc 2640
tgactttttc tgtcatgagt gagattgttg aacaaactga atatatgggc tatagcaagt 2700
agctttacag tacagatctt acaattaagt ttgcttttg ttaaagtgtg taccattttt 2760
tctgtttgga gtaagacaaa aattgttttg acatagggtc cctaggggtac acttgctcta 2820
gcatacttta aaggccactg ttgcaaagtc tacattttat gctgaatctg cattctgtca 2880
ggcaccgcgt gaaagacctc agtacatgct ttgcactctc ctttgctccc tttttccaat 2940
ttcttattgc atatcatttt gttgtaatac agaaagcagc atttttaaat gtccgtgtta 3000
agaattggcc cactgggtacc aactcacctc tattttgtca gttcatagtt gaagattttg 3060
ttttatttca aaaacaaagt acatttttga aataatgttt cagaataaaa taatctcact 3120
tttaagtgat ccattttaaa atttgtaatt caataaagtt tttttgttg ttaaacataa 3180
aaaaaaa 3187

```

<210> 24

<211> 2990

<212> DNA

<213> Homo sapien

<400> 24

```

cccggcattc cgtgctcctt ggttccggcg ttggagctct ttggggccca gctttgcgga 60
cccgggagct cgggacgcag gcggggcttg tgctccgcgg gggcagggcg taggggtgggc 120
ctectacctc ccctgatctc gcggtttgtt ccgtttcatt ggagcttccc ggaccgtgtg 180
ctcgacggtg ccctaggtgc cgtggggcca cgcgcgagtc tgataagcac cctccccggg 240
aatcatgcgg tgctgtgagg cctagcgaag atgaagatag aatgcaagggt agaaagtgct 300
ggataccttt agaaagctgc aggactggtg cgatgggagt tgagacgtaa gaacctgccc 360
gtccgtaggg ctctggatgc tgctgaggcc cgaggccctt atggcagatt tgaaaattca 420
ccctttaga gtcattcctg cctttgagcg gactcccttt taagagatct caagagagcg 480
ttcgggtggag gccctgggtc tgcacagctc acctccctgg gaactgctcg cccgagcgtc 540
ggagccggcg ctggccccct gcagccggaa ggttgagcc gcaggagccc cggaggccca 600
ggacacaggg ctcttgctct tgcagaatcc acaggtcttt cttgaggaaa tctgtagaca 660
gaactttgtg ctgctgtttt atctagggaa ggaacagaag agtgctgtct cctagaaatc 720
tagcactgga gaaacgagga aaattcttcc agcgatgggc tcccactcag agctgaggaa 780
gcttttctac tcagcagatg ctgtgtgttt tgatgttgac agcacggtca tcagagaaga 840
aggaatcgat gagctagcca aaatctgtgg cgttgaggac gcggtgtcag aaatgacacg 900

```

44

gcgagccatg ggcggggcag tgcctttcaa agctgtcttc acagagcgct tagccctcat	950
ccagccctcc agggagcagg tgcagagact catagcagag caacccccac acctgacccc	1020
cggcataagg gagctggtaa gtcgcctaca ggagcgaaat gttcagggtt tcctaataatc	1080
tggtggcttt aggagtattg tagagcatgt tgcttcaaag ctcaatatcc cagcaaccaa	1140
tgtatttgcc aataggctga aattctactt taacggtgaa tatgcagggt ttgatgagac	1200
gcagccaaca gctgaatctg gtggaaaagg aaaagtgatt aaacttttaa aggaaaaatt	1260
tcattttaag aaaataatca tgattggaga tgggtgccaca gatatggaag cctgtcctcc	1320
tgctgatgct ttcattggat ttggaggaaa tgtgatcagg caacaagtca aggataacgc	1380
caaatggtat atcactgatt ttgtagagct gctgggagaa ctggaagaat aacatccatt	1440
gtcgtacagc tccaaacaac ttcagatgaa tttttacaag ttatacagat tgatactgtt	1500
tgcttacagt tgctattac aacttgctat agaaagttgg taaaaatgat ctgtacttta	1560
aactacagtt aggaatccta gaagattgct tttttttttt ttttaactgt agttccagta	1620
ttatatgatg actattgatt tcctggagag gttttttttt tttttgagac agaactctgc	1680
tctgtgccc aggctggagt gcagtggcgc ggtctcggct cactgcaagc tctgcctccc	1740
aggttcacgc cattctcctg cctcagcctc ccgagtagct gggactacag gcgcccgcga	1800
ccacatccgg ctaatttttt gtttttttag tagagacggg gtttgaccgt gttagccagg	1860
atggtcttga tctcctgacc ttgtgatccg cctgcctcag cctcccaaag tgctgggatt	1920
acaggcttgg gccaccgcgc ccagccaatg tcctagagag ttttgtgatc tgaattcttt	1980
atgtatatat gtagctatat ttcatacaaa gtgctttaag tgtggagagt caattaaaca	2040
cctttactct tagaaatacg gattcggcag ccttcagtga atattgggtt ctctttggta	2100
tgtcaataaa agtttatccg tatgtcagaa cggattttgt gaattttcag ttctgcctct	2160
tgcatattgg aatacccaat atttcaggta ccgtgttgaa gcataaatag ccccaggca	2220
agaaacaggc ttaagactct actttgctta gtgctgggta caatgtcctc accccatgag	2280
cccactccca ctctctgaag ccctgggacc tggaaagtcc ttttttttac ttcttgggat	2340
ttgtcatata tgaaatgtta caaaagtgtt ttgttttttg ttttcctcca atataacaat	2400
agagtcttaa acaaaagtac tgattaaaaa tggatatttg ggctcaggcc tgtaatctca	2460
gcactgtggg aggacaagtt aagaggatca cttgaggaca ggaattcgag accagcctgg	2520
acaacagagc aagaccctgt ctctgcaaaa aataaaaaca ttagctggat gtggcggcac	2580
gcacctgtag tcccagctac ttggtgggct gagatgggag gatcccttga actcagtagt	2640
tcaaggctgc agtgagctgt gactctgcca ttgtactcca gcctgggtga cagtgagacc	2700
ccgtctctta aaaaaaaaaa aaaaaaaaaa gattttttga aaatccctta aagttaaaag	2760

45

aattaaaaac aggttttact aattcacaag ggccagcatt ttcccctaaa tgaattaaat 2820
 ttttaataact cctaagaggc tattataaac cttttctttt ttataaatgc cttggaaata 2880
 ctccgaaagc caggtttatg tttgttttga gcagagccaa gcaagggaaa tttcagaaca 2940
 tgctttgaat gtgtgagatg ctataccctc cctggaggaa aaatgggggg 2990

<210> 25
 <211> 3153
 <212> DNA
 <213> Homo sapien

<400> 25
 cccggcattc cgtgctcctt ggttccggcg ttggagctct ttggggccca gctttgcgga 60
 cccgggagct cgggacgcag gcggggcttg tgctccgcgg gggcagggcg tagggtagggc 120
 ctectacctc cctgatctc gcggtttgtt ccgtttcatt ggagcttccc ggaacctgtg 180
 ctgcacggtg ccttaggtgc cgtggggcca cacgcgagtc tgataagcac cctcccccg 240
 aatcatgcgg tgctgtgagg cctagcgaag atgaagatag aatgcaaggt agaaagtgtc 300
 ggataccttt agaaagctgc aggactgggt cgatgggagt tgagacgtaa gaacctgccc 360
 gtccgtaggg ctctggatgc tgctgaggcc cgaggccctc atggcagatt tgaaaattca 420
 ccttgtaga gtcatctctg ccttgagcg gactcccttt taagtttaca gaagcacttg 480
 cagaactcat cagaagccac cccgcttctc agcagatctc aagagagcgt tcggtggagg 540
 ccctgggtct gcacagctca cctccctggg aactgctcgc ccgagcgtcg gagccggcgc 600
 tggccccctg cagccggaag gttgcagccg caggagcccc ggaggccag gacacaggac 660
 agagtctcgt tctgtcgccc aggtggagt gcagtgggtg gatctcggct cacttcaacc 720
 tccgcctaca gggttcaagg gattctctg cctcagcctc ctgagtatct gggctcttgc 780
 tcttgagaa tccacaggctc tttcttgagg aaatctgtag acagaacttt gtgctgcgtt 840
 tttatctagg gaaggaaacag aagagtgtcg tctcctagaa atctagcact ggagaaacga 900
 ggaaaattct tccagcgatg gtctccact cagagctgag gaagcttttc tactcagcag 960
 atgctgtgtg ttttgatgtt gacagcacgg tcatcagaga agaaggaatc gatgagctag 1020
 ccaaaatctg tggcgttgag gacgcggtgt cagaaatgac acggcgagcc atgggcgggg 1080
 cagtgccttt caaagctgct ctacagagc gcttagccct catccagccc tccagggagc 1140
 aggtgcagag actcatagca gagcaacccc cacacctgac ccccggcata agggagctcg 1200
 taagtgcctt acaggagcga aatgttcagg ttttctaat atctgggtggc tttaggagta 1260
 ttgtagagca tgttgcttca aagctcaata tccagcaac caatgtatct gccaatagcc 1320
 tgaaaattcta cttaacggt gaatatgcag gttttgatga gacgcagcca acagctgaat 1380

ctggtggaag	aggaaaagt	attaaacttt	taaaggaaaa	atttcatttt	aagaaaataa	1440
tcatgattgg	agatggtgcc	acagatatgg	aagcctgtcc	tctgtctgat	gctttcattg	1500
gatttggagg	aaatgtgatc	aggcaacaag	tcaaggataa	cgccaaatgg	tatatcactg	1560
atthttgtaga	gctgctggga	gaactggaag	aataacatcc	attgtcgtac	agctccaaac	1620
aacttcagat	gaatthttac	aagttataca	gattgatact	gtttgcttac	agttgcctat	1680
tacaacttgc	tatagaaagt	tggtacaaat	gatctgtact	ttaaactaca	gttaggaatc	1740
ctagaagatt	gctthttttt	thttthtttaac	tgtagtthcca	gtattatatg	atgactattg	1800
atthtcttga	gaggthtttt	thttthtttga	gacagaatct	tgtctgtttg	cccaggctgg	1860
agtgcagtgg	cgcggtctcg	gctcactgca	agctctgcct	cccaggthca	cgccattctc	1920
ctgcctcagc	ctcccagta	gctgggacta	caggcgcccc	ccaccacatc	cggtcaattt	1980
thttgtattt	tagtagagac	ggggtctgac	cgtgttagcc	aggatggtct	tgtctctctg	2040
accttgtgat	cgctctgcct	cagcctccca	aagtgtctgg	attacaggct	tgggcccacc	2100
cgcccagcca	atgtcctaga	gagthttgtg	atctgaattc	thttatgtata	thttgtagcta	2160
tatttcatac	aaagtgtctt	aagtgtggag	agtcaattaa	acacctttac	tcttagaaat	2220
acggattcgg	cagccttcag	tgaatattgg	thttctctttg	gtatgtcaat	aaaagttht	2280
ccgtatgtca	gaacggattt	gtggaatttt	cagthctgcc	tcttgcatat	tgggaataccc	2340
aatatttcag	gtaccgtgtt	gaagcataaa	tagccccag	gcaagaaaca	ggcttaagac	2400
tctactthtc	ttagtgctgg	gtacaatgtc	ctcaccocat	gagccactc	ccacttctctg	2460
aagccttggg	acctggaaag	thctthttttt	tactthcttg	gatttgtcat	atatgaaatg	2520
ttacaaaagt	thtttgtttt	ttgtthttct	ccaatataac	aatagagtct	taaacaaaag	2580
tactgattaa	aatggatat	ttgggtctcag	gcctgtaatc	tcagcactgt	gggaggacaa	2640
gttaagagga	tcacttgagg	acaggaattc	gagaccagcc	tggacaacag	agcaagaccc	2700
tgtctctgca	aaaaataaaa	acattagctg	gatgtggcgg	cacgcacctg	tagtcccagc	2760
tacttgggtg	gctgagatgg	gaggatccct	tgaactcagt	agttcaaggc	tgcagtgagc	2820
tgtgactctg	ccattgtact	ccagcctggg	tgacagtgag	acccctctc	thtaaaaaaa	2880
aaaaaaaaaa	aaagatttht	gcaaaatccc	thaaagttaa	aagaattaaa	aacaggthtt	2940
actaattcac	aagggccagc	atthtcccct	aatgaatta	aattthtaata	actcctaaga	3000
ggctattata	aaccatttht	thttttataaa	tgccttggaa	atactccgaa	agccaggtht	3060
atgtthgttt	tgagcagagc	caagcaaggg	aaatttcaga	acatgcttht	aatgtgtgag	3120
atgctatacc	ctccctggag	gaaaaatggg	ggg			3153

<210> 26
 <211> 2968
 <212> DNA
 <213> Homo sapien

<400> 26
 cccggcattc cgtgctcctt ggttccggcg ttggagctct ttggggccca gctttgcgga 60
 cccgggagct cgggacgcag gcggggcttg tgctccgcgg gggcagggcg taggggtgggc 120
 ctctacctc cctgatctc gcggtttgtt ccgtttcatt ggagcttccc ggaccgtgtg 180
 ctcgacggtg ccctaggtgc cgtggggcca cacgcgagtc tgataagcac cctcccccg 240
 aatcatgcgg tgctgtgagg cctagcgaag atgaagatag aatgcaaggt agaaagtgc 300
 ggataccttt agaaagctgc aggactggtg cgatgggagt tgagacgtaa gaacctgccc 360
 gtccgtaggg ctctggatgc tgctgaggcc cgagsgccct atggcagatt tgaaaattca 420
 cccttgtaga gtcattcctg cctttgagcg gactcccttt taagtttaca gaagcacttg 480
 cagaactcat cagaagccac cccgcttctc agcagatctc aagagagcgt tcgggtggagg 540
 ccctgggtct gcacagctca cctccctggg aactgctcgc ccgagcgtcg gagccggcgc 600
 tggcccccctg cagccggaag gttgcagccg caggagcccc ggaggcccag gacacaggat 660
 ctagggaagg aacagaagag tgtcgtctcc tagaaatcta gcaactggaga aacgaggaaa 720
 attcttccag cgatggtctc ccaactcagag ctgaggaagc ttttctactc agcagatgct 780
 gtgtgttttg atgttgacag caccgtcatc agagaagaag gaatcgatga gctagccaaa 840
 atctgtggcg ttgaggacgc ggtgtcagaa atgacacggc gagccatcgg cggggcagtg 900
 cctttcaaag ctgctctcac agagcgctta gccctcatcc agccctccag ggagcaggtg 960
 cagagactca tagcagagca acccccacac ctgacccccg gcataaggga gctggttaagt 1020
 cgctacagg agcgaaatgt tcaggttttc ctaatatctg gtggcttttag gagtattgta 1080
 gagcatgttg cttcaaagct caatatccca gcaaccaatg tatttgccaa taggctgaaa 1140
 ttctacttta acggtgaata tgcaggtttt gatgagacgc agccaacagc tgaatctggt 1200
 ggaaaaggaa aagtgattaa acttttaaaag gaaaaatttc attttaagaa aataatcatg 1260
 attggagatg gtgccacaga tatggaagcc tgctctcctg ctgatgcttt cattggatgt 1320
 ggaggaaatg tgatcaggca acaagtcaag gataacgcca aatggtatat cactgatttt 1380
 gtagagctgc tgggagaact ggaagaataa catccattgt cgtacagctc caaacaactt 1440
 cagatgaatt ttacaagtt atacagattg atactgtttg cttacagttg cctattacaa 1500
 cttgctatag aaagtggta caaatgatct gtacttttaa ctacagttag gaatcctaga 1560
 agattgcttt tttttttttt ttaactgtag ttccagtatt atatgatgac tattgatttc 1620

48

ctggagaggt tttttttttt tttgagacag aatcttgctc tgttgcccag gctggagtgc 1680
 agtggcgcggt tctcggtcca ctgcaagctc tgcctcccag gttcacgcca ttctcctgcc 1740
 tcagcctccc gagtagctgg gactacaggc gcccgccacc acatccggct aattttttgt 1800
 attttttagta gagacggggg ttgaccgtgt tagccaggat ggtcttgatc tcttgacctt 1860
 gtgatccgcc tgcctcagcc tcccaaagtg ctgggattac aggcctgggc caccgcgccc 1920
 agccaatgtc ctagagagtt ttgtgatctg aattctttat gtatatattgt agctatatatt 1980
 catacaaagt gctttaagtg tggagagtca attaaacacc ttactctta gaaatacga 2040
 ttggcgagcc ttcagtgaat attggtttct ctttggtatg tcaataaaaag tttatccgta 2100
 tgtcagaacg gatattgtga attttcagtt ctgcctcttg catattggaa tacccaatat 2160
 ttcaggtacc gtgttgaaac ataaatagcc ccagggcaag aaacaggctt aagactctac 2220
 tttgcttagt gctgggtaca atgtcctcac cccatgagcc cactccact tctgaagcc 2280
 ctgggacctg gaaagtcctt ttttttactt cttgggattt gtcatacatg aaatgttaca 2340
 aaagtttttt gtttttttgt ttctccaat ataacaatag agtcttaaac aaaagtactg 2400
 attaaaaatg gatatttggg ctcaggcctg taatctcagc actgtgggag gacaagttaa 2460
 gaggatcact tgaggacagg aattcgagac cagcctggac aacagagcaa gacctgtct 2520
 ctgcaaaaaa taaaaacatt agctggatgt ggcggcacgc acctgtagtc ccagctactt 2580
 ggtgggctga gatgggagga tcccttgaac tcagtagttc aaggctgcag tgagctgtga 2640
 ctctgccatt gtactccagc ctgggtgaca gtgagacccc gtctcttaa aaaaaaaaaa 2700
 aaaaaaaaga tttttgcaa atcccttaa gttaaaagaa ttaaaaacag gttttactaa 2760
 ttcacaaggg ccagcatttt ccctaaatg aattaaattt taataactcc taagaggcta 2820
 ttataaacca tttctttttt ataaatgcct tggaaatact ccgaaagcca ggtttatgtt 2880
 tgttttgagc agagccaagc aagggaatt tcagaacatg ctttgaatgt gtgagatgct 2940
 ataccctccc tggaggaaaa atgggggg 2968

<210> 27
 <211> 2664
 <212> DNA
 <213> Homo sapien

<400> 27
 tatatcaact ttctgtgtca agatcttttag gtgaagaaca gttttctgtg ggatctgtca 60
 acttcatgaa acagaccaat atccagaaaa atactaatac cagagataca agtaaaaaaa 120
 caaaagacca gctcatcatc gacgctggtc agaaacattt tggggctact gtgtgcaagt 180
 cttgtggtat gatataact gcttccaacc ctgaagatga aatgcagcat gtacagcatc 240

49

accacaggtt tctggaagga atcaaatatg tgggttgga gaaagaacgt gtagtagcag	300
agttttggga tgggaaaatc gtgttggttc tgccacatga tccaagcttt gctatcaaaa	360
aggtagaaga tgtccaagaa cttgttgata atgaattggg cttccagcaa gttgttccta	420
aatgtccaaa caaaataaaa acttttcttt ttatatctga tgaaaagaga gtagttgggt	480
gtttaattgc agaaccatc aaacaggcat ttcgtgtcct gtctgaacca attgggtccag	540
aatccccaag ctctacggaa tgtcctaggg cttggcaatg ttcagatgta ccagaacctg	600
cagtctgtgg gataagtaga atctgggttt tcagactgaa gagaagaaag cgcattgcaa	660
gacgactggg tgataccctc aggaattgct tcatgtttgg ctgttttctc agcactgatg	720
aaatagcatt ttctgacca acaccagatg gcaagtatt tgcaaccaag tactgcaaca	780
ccccaatTT cctcgtatat aattttaata gttaaagctg atttcagtta taaaggagtt	840
actatctgga taagttcaaa gagctcctta ttataaaata caaactatTT aatatcaaaa	900
taaaaaatac cgagactcac actcatcac acacacacac acacacacac acacacatat	960
cacagttgtg ttccttatga gttgaaaagt caggaataaa tttgttgaaa attatctggg	1020
gattcaaagg aaaaatcttt ggggtgattc cctgattagc actctgaatg ttttaattatg	1080
aaactttgta gctataactg gaaaattacc tgactctttg taagagtatt aaatacaaa	1140
tgatttttct ctagaaatgt gacctggtct tttataaagc ccactcttag accaggatta	1200
tctaatacca catcagaagc aaacaggcaa atttaaactt gggcaagtaa tttctgtgcc	1260
caatttgtaa agggaattcc tgaatttttt ttttttttaa tagaggcatg ggtctcactg	1320
tgttgoccag gctggtctga aacttttggg ctcaagcgat cctcccaaaa cgctgggatt	1380
acagtcatga gccaccgtgc ccagcctaatt tctgacttc tctatacaga gtcttcactt	1440
gataggcact cgtctgragt aactcagttt gaatatcttt agaaaatggt tagaatttat	1500
ttgtaacaag atggtaagga ataagattat cccatatgca tttctgtaga gcagaatttg	1560
atagcttagt gttcaatctt tttgaaaata aatgtttacc tgtcatcaga ttttaattaaa	1620
attatactta gtaattgcac tattacttag ttaatttttg ttgtatggaa atattggtag	1680
tactactttg ggaacctgtt actgacaatt gatgtcatta acaaaatgcc tagttggatt	1740
agatgttttc attttctaatt tttttgcttg tttaaaatgc accttacttg ttctgagata	1800
cctggcaaaa gtcttttaca aatgtatggg aatagaacca aggttagtaa atatacatag	1860
gctggtggaat gagagaccat ggaactgtgt aaatacactt aaatgttcac acatttttct	1920
agtgtaattc ttggatactt taaaaagcaa aacattgttc aaattgtttt gattctgaaa	1980
aatcattcaa ctgctaactg gcaataagac tctaggcaag tcgttttcca gattgtaatt	2040
atatgtagaa actattcatc tgcattcatt ttatttgcct gtaagttaac atgtttccaa	2100

aattttaaag cctgggtccc caaaagaatg tggaggtatt aaaatgtatg taattatgca 2160
aacattttta tgctattttc tgcacttatt tctttttaa attttattta aaatttttaa 2220
ttaacatttt gtttgcttaa tgcctttgtt atgaatcaat taaaattctt tattttatac 2280
aactaaatct gatttttaatt attttattat gaaaatagta tatgtttaa aaaattcaga 2340
taatacagaa atagagattg ccaaaagaag aggcttccc gccgggccc gtggctcacg 2400
cctgtaatcc cagcactttg ggaggccgag gccgggtgat catgaggta ggagatcgag 2460
accatcctgg ctaacaagg gaaaccccg ctctactaaa aatacaaaaa attagccggg 2520
cgcggtggcg ggccgctgta gtcccagcta ctggggaggc tgaggcagga gaatggcgtg 2580
aaccggggag gccgagcttg cagtggccc agattggcc actgcagtc gcagtcggc 2640
ctgggcgaca gagcgagact ccgt 2664

<210> 28
<211> 1757
<212> DNA
<213> Homo sapien

<400> 28
ctagcatcat aggtcaaaga cgttattaag tatcgactct gaaaaagcaa ctataaatac 60
tgcaaatacga ctaagccaga ggacgcaaat atatacctgcg tgttggtgctc tggactgtgg 120
ttgagacttc atggctcgtgc tctgggctca tgggggcagc tgaactgctca taattaagat 180
tgctgttgcc gctgcctgtg ttccaaagag aacacaagag gacagagcta aggtgttaga 240
atgcggaaga acttgacaga actagagcta gtcttcggat tgaaatgaat taccaataaa 300
gggttgaggaa atggatcaag gagagggaag cgttttgatg gtccctgctc cgagggtcag 360
cccatttgca gttgctgata accttgctcag gtcaccagat aaaggcaagt cttgtcacc 420
tcaggcacct ggctgcgaag taataaaacg gttgccttat catctaaag tggagtgaat 480
caaacctcag ccagggtta ttatagtaaa ctgaaattgc ctgtccttta caaaaaaaaa 540
ggcggaggga gagagaaagg aaaagggtt aaggcaggaa attgtgtttg tctttctcct 600
tggttttaa aaagaaacga gcaaacagc aaaaagtttt ccaggagtg agaaaagcag 660
cccggctaga ctccctcac cctgggttaa caggattgcc gacagatcag gccacgtga 720
tggtcaagaa aagaggctca agctgatgaa aatccaagaa atcttcttag gagcttctc 780
ttctaaatgt aaatgactga gtcattgctt tgctaaggag ggaaggaagt tacaatcaca 840
ccaagtgact cattcattgc tgttagctcc gccagttgga tgaaaagtt tagcaaaagc 900
agcaacaaat gtacttttaa tactagcaca gtaagggaat tctgtcttt caggatgaat 960
gcatccaca caaaagagct cctgttgaca tctcatttac aatctcccc aggacacaga 1020

caagaccctt tcaataaatac cagctcagaa acacctattg ttcaaaatct tcaactcgcc 1080
 acaggctacc accactccct atggctttgc aaaattaaag atttagaaga aggatggggc 1140
 ggtggaagct atgaaaagag gcaggaaaaa agttcctttg acccgatgct gtcagagagc 1200
 gtgcatgaag aagaaagtta atggtatttc ctttatata agaagcgct aagaaatgcc 1260
 tgtgacgttc gtgaactagt gattgtgaat tccaaatttg atgccaactt tatgtgtaaa 1320
 gaagctaact cctgccaca tcgtggctga atgaacagct ggactatgc ttaaccatt 1380
 cccagcttat aaaagcccca tggcagctgc agtgaagcat cagaaaagta tagtaagaag 1440
 aaactgaatt tgaagtggat tcttacaag gaaaaagaaa atcactattg taactatacc 1500
 aaattactat gtatgtgagc tccagcttt gacatcaagt cgttacagcc acgtaatggg 1560
 attacgggtg atttttactt tatcttttg gcttctctga attttctat attttgaaa 1620
 agcacctgca ttattttgta attataaaaa agtataaata agaattatac acactattat 1680
 ttcttactg ctatgacatg actagattac aatttttttc tttttgagat gactttcggt 1740
 ctgtttccc aggtgg 1757

<210> 29

<211> 1299

<212> DNA

<213> Homo sapien

<400> 29

caggacacct tgggccagct tggttttact ttagatttca ctgttgtooc accccacttc 60
 ttcttccacc aacatgcaag ttctttcctt ccctgccagc cagatagaca gatgggagag 120
 gcagtccggg ccttcgttgt cagtagttct ttgatgtgaa aggggcagca cagtcattta 180
 aacttgatcc aacctctttg catcttacag agttaaacag ctaaaagaag taaaataaga 240
 aggcaatgct tgtggaatgt acagtgcata ttgacggcac acgcctcatt acgattcgcc 300
 tgcttgcttc tcctgttcaa tcgtttcttt ggaaggcagt ggatttttct cttgcgtctc 360
 tgtcttcttc agtttcgact tatcgaattt ctcatctca gccatatcg atttgtcaga 420
 catgggttac gaggagaagc ggagcgaggc acgcgagaac gagcgaagtc tggccttcgt 480
 caagatgggt ggacaccacg tcgccttcct ggaagcagac gtgcctcagg ctgagcggga 540
 ccatggggcc ttcctcagg ccctgcggag gtggttgga tccgcagggc tccctcctt 600
 caggaacaag tcacctgcac cgggtcccggt gacgtacgag ctgcccacac tgtataggac 660
 ggaggactat tttctgttg acgccgggga agcacagcac ccccccgca cctgcctctg 720
 gcctttgtga gctttgtggt cttcccatca ggaacgctgg aaagtacat tgtgtacaca 780
 ctgcagcttg ggggtttttt cttgtattg ctgtttattt tatattttaa aaatatttaa 840

aaaaatgtcg agatgggggtc tcactatgtt gtccagactg atctcaaact cctgggctca 900
 agtgatccac ccaccttggc cttccaaagt ggtgggatta tgggcaggag cctccgtgcc 960
 caggctgctg ccattttcaa atttcctccc tgcctcatgt gagaccacag ggtttggaga 1020
 agcagttgga acccacgtgt ggtgatgcct cccacatcgg cctgcttggg gttctacagg 1080
 ggttgaggga ccaggcctgg ccggggctga tggacagtgg ggactttcct tctctccatg 1140
 atggctttgc aggggtcca tggctcctct ctctgtgatg ggtttttgca cggggtgtgc 1200
 tctgccactg tgggtgggtgg gtggatgctg cttctgttgc ctccagacct cgggtgccac 1260
 agccttgagg atccttccaa taaagggtgc aagagctca 1299

<210> 30
 <211> 2456
 <212> DNA
 <213> Homo sapien

<400> 30
 ggggtcacaa gcgagagcag ggggcacagc ttccaccgt cctagccagg gtgagaccac 60
 cctgcctgct ggtggagcca ggcgggcca gagccacct ggaagatgga ggctgcacgg 120
 cactgctggg tccggggcag ccccaggga gcagagcatt ccctggcctt ccctgctggg 180
 gccagctcct taccacagag acgcccgtg gaactcacta ctggcgatcg cggacgcccc 240
 aggaaggcga gtggcacgag gtgtggcggg gctgccacag gcagtacgg agcaccgct 300
 ggtgccaggc tcaccctca gatacagcct cgtgggctgg ctcagtggcg gccctgactc 360
 tccaaggctc gaggtctgct ctgtcttcca ttccatgact cacaggaggt tcaaggttac 420
 ttccactgtg gcagctgcct ccctcctccc tctccaggat ggaaggaggt cctgctgtgc 480
 aaacctgcct ggctgtcccc ttccgggaca cggacagggg gtttcctggc agttcctggg 540
 cctcccttga gggctaaggg tcccccggt ctgtggcgc ctccagcaca tccaccaga 600
 gtccctgggc gtgaacacag ccgctgggga cgatcaccgc ctgccagcg tgcagccctg 660
 gggctgctgc cttatctcgg ctctcctgct ctctgccca gctgttcaac gtctacccat 720
 ggctcggggc cctgctccag ctgcaccggc ccgtcctgcg caagatcgag gaggtccgtg 780
 ccattctgag gaccctcctg gaggcgcgga ggccccacgt gtgcccgggg gaccccggtg 840
 gcagctatgt ggacgcccctg atccagcagg gacaggggga tgaccccgag ggcctgtttg 900
 ctgaggccaa cgcggtggcc tgcaccctgg acatggtcat ggccgggacg gagacgacct 960
 cggccacgct gcagtgggccc gcacttctga tgggccggca cccggacgtg cagggtgaga 1020
 ccccgcgccc tggcgagacg gctccttctg cccccggggg acccccaggg acgagggatg 1080
 gcgctgccac ccaagcggcc caccctttgc ccaggccgg gtgcaggagg agctagaccg 1140

cgtgctgggc cctgggcgga ctccccggct ggaggaccag caggctctgc cctacacaag 1200
 cgccgtgctc cacgaggtgc agcggttcat caagctcctg ccgcacgtgc cccgctgcac 1260
 cgcgcccgac acacagctgg gcggcttcct gctccccaag ggcaacgccc tgattcccct 1320
 gctgacctcg gtgctcctgg atgagacaca gtggcagacc ccaggccagt tcaaccccgg 1380
 ccatttctctg gacgcgaatg ggcactttgt gaagcgggag gccttctctg ctttctctgc 1440
 aggcgcgcgc gtctgtgttg gggagcgctt ggccaggacc gagctcttcc tgctgtttgc 1500
 cggcctcctg cagaggtacc gcctgctgcc ccgcctggc gtcagtccgg cctccctgga 1560
 caccacgccc gcccgggctt ttaccatgag gccgagggcc caggccctgt gtgcggtgcc 1620
 caggccctag gagtccccc agccccagg tctcctgac cactccctc ccagccctgg 1680
 gtctccccc cctctctct cccacccac agctcggact gctctgggag ggccctgagg 1740
 actccacccc tcacccccc cccacaggg tcagcaactg cttccggtta caccaggac 1800
 taccctgcc cgaccctgtg ggacccccc cctctgatg ctgtctgcag ctgagtcct 1860
 gccagcccc aggagcgctt ccaggsgccc gccactctc ccacccctga agctgcactc 1920
 ccacccacct agtccccc agggccccc agcacctaca gctggggctg caggagaca 1980
 acgggtggct gcatccagcc agagacaggc gcagggtggg gtctctcagc tgcgagccct 2040
 gcacccccca ggtcctggga ctctgcaga cccactcca tccccctcc tggaacactt 2100
 cctgcagctg tgcttgagg cagtcggcct gcagtgcag actctgagc aagccactgg 2160
 ggccatgctg atgactggg caggagggca agggccacat tctccttcag agacaggcac 2220
 tggcgccaga ggcttcctt gggcggggg agggcacctc agccctgaa gacaagcagc 2280
 actgcagtgg caaaaatgga aacactgacc cggcgcggtg gctcatgcct gtaatcccag 2340
 cactttggga ggccgaggca ggcgaatcac gaggtcagga gttcgagacc agcctgccc 2400
 acatggtgaa accctgtctc tactaaaaat acaaaaaaat taaccgagca tggtgg 2456

<210> 31
 <211> 642
 <212> DNA
 <213> Homo sapien

<400> 31
 gggaaaggcc atgttcctc ctctgtgcca tgtccccacg tctcaggcct ttgtcaacga 60
 atccctcagc ccggacagag ggccgtggca tggctaattg cttggagaag cagctgaggt 120
 gctgctttat ggcataaggc gagcgtcctt tgtcttgagg tctctgggc aggggacact 180
 tgtgcctggt gcccctggga ggaaggagag gagcatgtgc gggaaagagc aggaggccga 240
 ggtgggctga tcacgaggtc agsagttcga gaccagcctg gccaacatgg cacacatggc 300

54

acgcacatcg tggcgatgtc gcgtgccatg tgtctgatgc tgctgagcgt ggcgcgagca 360
 ttcttgttga tgggtggccg cacataggag gtggcaggct tccgctggcc ggatctccgc 420
 ttaatgacca ccacgacacc ttgccgctcg gctgccggct ccacgcccac agtcttgccg 480
 tgaatcagtc cgttgtagcg gaaggaattg cgggccctca agttattggg ctgagtgtcg 540
 tagtttttgg attatcatth taaaacatgg aaaactggag cagttccgca cgaccaatcc 600
 agttgctaata gcttgagcat cggtagcgag acatacgcca gc 642

<210> 32
 <211> 3907
 <212> DNA
 <213> Homo sapien

<400> 32
 gcgaattggg cctctagacg catgctctag caggcggcgc agtggtgctgg aaaggaccaa 60
 tcgacctgag gacttgcgag ccgctcagct cccgggacgt ttggagctgc tgctaaataa 120
 tttctgctca gccatgtcgc cggctccaga tgcagccccg gctcctgcgt cgatctccct 180
 gtttgacctc agcgcggatg ctccggctct tcagggcctg agcctggtga gccacgcgcc 240
 tggggaggct ctggcccggg ctccgcgtac ttctgttca ggccagggg agagagaaaag 300
 cccagaaaga aagctactcc agggctctat ggatatttca gagaagtat tttgttcaac 360
 ttgtgaccag accttccaga accaccaaga acagaggga cattataagc ttgactggca 420
 tcggtttaac ctaaagcaac gtctcaagga caagcctctc ctgtctgcc ttgactttga 480
 aaagcagagc tccacaggag atctttccag catctcggga tcagaagact cagactcagc 540
 cagtgaggag gacttgcaga cactggatcg ggagagggt acatttgaga agttgagccg 600
 acccccaggc ttttacctc atcgagttct tttccagaat gccagggcc agtttcttta 660
 tgcctaccgc tgtgtcctag gccctcatca ggatcccca gaagaggcag aactgctgct 720
 acagaacctg caaagtagag gtcccagaga ctgcgtggtg ctcatggctg cagctgggca 780
 ctttctggt gctatatttc aaggaagaga agtggtgaca caaaaactt ttcaccgcta 840
 tacggttcgg gccaaagcgg gcacagccca ggggcttcgg gatgcccgag gtgggccatc 900
 acactctgct ggagccaacc tgaggcgcta caatgaagcc acactatata aggatgttcg 960
 tgacctgctg gcagggccaa gctgggctaa ggcgctggag gaggctggta caatactgtt 1020
 gcgtgctccc cgctctggcc ggtctttgtt ctttggaggc aaggagcac ccctgcaaag 1080
 gggggatccc cgactttggg atatccccct cgccaccgc agaccacct tccaagagct 1140
 acagcgtgtg ctccataagc tgaccacttt gcatgtctat gaagaagacc ctcgsgaagc 1200
 agtcagactg cactcacctc agacacactg gaaaacagta agagaggaga gaaagaagcc 1260

tactgaggaa gaaataagaa agatctgcag ggatgaaaag gaagcgctgg ggcagaatga 1320
 ggaatctccc aaacaggggt tgattactat ctggcaactg tcagatctga gtttctgtcc 1380
 taaaaatgca ctggcaaatt ccctactctc ataactgacc catttcctta tttaaacaca 1440
 caccacagt gtctatctta gcaattactg agacatgttt agtgaccttt ccaaactctat 1500
 tatctctttt gttatggatg tttccccaga gctaagaaaa tctttgtgtg gagcagatgc 1560
 gtggatgtgt tgcattggatc tcacatagtt tatctttgat tggatgctgt ggtttgaggc 1620
 tgagggctgc ttccatgctt tcctctattg tgccgcaccc taaggctact catacgsga 1680
 gtccagggac ttgttcttgt ctgggctgag agcctcattt ctgcatgtga tataatggac 1740
 tcagctcttg atgtgctact tttatctggg tgacaaaata aaaacaattt catttcaggc 1800
 tttcatcttt atgcatctgc ttctaccctc tgagtactcc ctatagggat ttccatgtc 1860
 aggtttttcc ctagggttcag ggtcggaggg agaagatggc tttcaggtag agttggagct 1920
 agtggagttg actgtgggga ctctggatct ttgrgagtct gaagtattgc ccaagcggag 1980
 gaggagaaaa aggaataaga aggagaaaag ccgagaccag gaggctgggg cacatcggac 2040
 tcttctccag caaactcaag aagaggagcc ttccacacag tcatccagg cagttgctgc 2100
 ccccttgggc cctttgctgg atgaggccaa agcccttggc cagccagagc tctggaatgc 2160
 actgcttgct gcttgccgag ctggagatgt tggagtgtta aagctgcagc tagctcccag 2220
 ccctgcagac cctagagttc tgtctctgct cagtgcctcc ttgggctccg gtggctttac 2280
 tctcctgcat gcagcagctg cagctggaag aggtcagtg gttcgtctgc tgctggaagc 2340
 aggtgctgac cccactgtgc agtgagtaaa ggtccctatc ctgagtcatt ttgggtatag 2400
 agaggataat ttggagggtta aagttggcat tggctacttg gcaatattcc cttgggtctg 2460
 ttgggtgatg ttgggaaagg caggaggcaa gttaaaacca tttttggagt ttttgcaact 2520
 agggactctc gggcccgcc accttatact gttgcggctg acaaatcaac acgtaatgag 2580
 ttccgaaggc tcatggagaa gaatccagat gcctacgatt acaacaaggc tcaggctatc 2640
 tggaatagga aggacaagca gagtgggaag gcatcacaga tcctggctag atcctttcta 2700
 cttcttgcat ttttaccaaa gataacttat agggctctat atttgaaatc ctccagggtg 2760
 caggaccatt gacaccagaa atggaggcac ggcaggctac acggaagg gagcagaagg 2820
 cagcccgccg gcaacgggag gaacagcagc agaggcagca ggagcaggag gagcgtgaac 2880
 gagaagagca gcggcgattt gccgccctca gtgaccgaga gaagagagct ctggctgcag 2940
 agcgccgact cgctgcccag ttgggagccc ctacctctcc aatccctgac tctgcaatcg 3000
 tcaatactcg acgctgctgg agttgtgggg catccctcca aggcctgact ccctttcact 3060

56

acctcgactt ctctttctgc tccacacggt gcctccagga tcatcgccgt caggcagggga 3120
 ggccctcttc ctgatctctt acagctctac ctggggccaa ctcagggacc tgagagggca 3180
 cattcacagc agccctaggt tttttcttcc ccgtgaaacc agagatgatt tggagatgg 3240
 ggggtgaagga cactcgggaa ctagggcaaa gacagggcta gaggtatgtg gagctggtag 3300
 tgtctctgga attttaata caataaagtt tggcaaggaa tgtgtacttg tacttacatt 3360
 cagaggcact gtggccttta gttccttagg gtcaccgtgg ccagcaccaa gggatcctgc 3420
 ccactccatg tcccagggtcc aagggttact tttttttttt tttttttttt ttgagatgga 3480
 gtgtctcact gtcagccagg ctggaagcga gactctgtct caaaaaacac aaacaaacaa 3540
 aaaaagaaa tgtaaaatct cagatcctac ctcagaccta tagaatcaga atttgtatct 3600
 taacaagatt cccaggtgat cctaggcacc ttcaaaattg agaagcatgg ctttacttga 3660
 ctgggctccc tgaggacagg gagtgccttg ttcattctca atcctcagcc tctagcacag 3720
 ggccgggtat atagtagggt aaatctggat gaatcaatgt cataaccaa aggctaaaac 3780
 aggttcagaa ccaggggaaa ccattggaaa atcttcaggg tgatccgggg tgtggaagg 3840
 aggaaccagg tcacaagaag gacctcttcc ctggagagtc ctgtttcagc aaaacagcca 3900
 ttccttc 3907

<210> 33
 <211> 3608
 <212> DNA
 <213> Homo sapien

<400> 33
 gcgaattggg cctctagacg catgctctag caggcgccgc agtgtgctgg aaaggaccaa 60
 tcgacctgag gacttgcgag ccgctcagct cccgggacgt ttggagctgc tgctaaataa 120
 tttctgtcga gccatgtcgc cggctccaga tgcagccccc gctcctgcgt cgatctccct 180
 gtttgacctc agcgcggatg ctccggctct tcagggcctg agcctggtga gccacgcgcc 240
 tggggaggct ctggcccggt ctccgcgtac ttcctgttca ggctcagggg agagagaaag 300
 cccagaaaga aagctactcc agggtcctat ggatatttca gagaagttat tttgttcaac 360
 ttgtgaccag accttcaga accaccaaga acagagggaa cattataagc ttgactggca 420
 tcggtttaac ctaaagcaac gtctcaagga caagcctctc ctgtctgcc ttgactttga 480
 aaagcagagc tccacaggag atctttccag catctcggga tcagaagact cagactcagc 540
 cagtgaggag gacttgaga cactggatcg ggagagggct acatttgaga agttgagccg 600
 acccccagga ttttaccctc atcgagttct tttccagaat gccaggggcc agtttcttta 660
 tgcctaccgc tgtgtcctag gccctcatca ggatccccc gaagaggcag aactgctgct 720

57

acagaacctg caaagtagag gtcccagaga ctgctggtg ctcatggctg cagctgggca	780
ctttgctggg gctatatattc aaggaagaga agtggtgaca cacaaaactt ttcaccgcta	840
tacggttcgg gccaaagcggg gcacagccca ggggcttcgg gatgcccag gtgggcatc	900
acactctgct ggagccaacc tgaggcgcta caatgaagcc acactatata aggatgttcg	960
tgacctgctg gcaggggcaa gctgggctaa ggcgctggag gaggctggta caatactgtt	1020
gcgtgctccc cgctctggcc ggtctttgtt ctttggagcg aaggagcac ccctgcaaag	1080
gggggatccc cgactttggg atatccccc cgccaccgc agaccacct tccaagagct	1140
acagcgtgtg ctccataagc tgaccacttt gcatgtctat gaagaagacc ctcggaagc	1200
agtcagactg cactcacctc agacacactg gaaaacagta agagaggaga gaaagaagcc	1260
tactgaggaa gaaataagaa agatctgcag ggatgaaaag gaagcgctg ggcagaatga	1320
ggaatctccc aaacaggggt tgattactat ctggcaactg tcagatctga gtttctgtcc	1380
taaaaatgca ctggcaaatt ccctactctc ataactgacc catttcctta tttaaacaca	1440
caccacagt gtctatctta gcaattactg agacatgttt agtgacctt ccaaactctat	1500
tatctctttt gttatggatg tttcccaga gctaagaaa tcttctgtg gacagatgc	1560
gtggatgtgt tgcattgctc tcacatagtt tatctttgat tggatgctgt ggtttgaggc	1620
tgaggctgc ttccatgctt tctctattg tgcggcacc taaggctact catacggaga	1680
gtccagggac ttgttcttgt ctgggctgag agcctcattt ctgcatgtga tataatggac	1740
tcagctcttg atgtgctact tttatctggg tgacaaaata aaaacaattt catttcaggc	1800
tttcattctt atgcatctgc ttctaccctc tgagtactcc ctgatggat ttcacatgtc	1860
aggtttttcc ctaggttcag ggtcggagg agaagatggc tttcaggtag agttggagct	1920
agtggagtgt actgtggga ctctggatct ttgtgagtct gaagtattgc ccaagcggag	1980
gaggagaaaa aggaataaga aggagaaaag ccgagaccag gaggctgggg cacatcggac	2040
tcttctccag caaactcaag aagaggagcc ttccacacag tcatcccagg cagttgctgc	2100
ccccttgggc cctttgctgg atgaggccaa agcccctggt cagccagagc tctggaatgc	2160
actgcttct gcttgccgag ctggagatgt tggagtgtta aagctgcagc tagctcccag	2220
ccctgcagac cctagagttc tgtctctgct cagtgcctcc ttgggctccg gtggctttac	2280
tctctgcat gcagcagctg cagctggaag aggtcagtg gttcgtctgc tgctggaagc	2340
agggtctgac cccactgtgc agtgagtaaa ggtcccatc ctgagtcatt ttgggtatag	2400
agaggataat ttggagggtta aagttggcat tggctacttg gcaatatcc cttggtctgg	2460
ttgggtgatg ttgggaaagg caggaggcaa gttaaacca ttttggagt ttttgcacct	2520
agggactctc gggcccggcc accttatact gttgcggctg acaaatcaac acgtaatgag	2580

ttccgaaggt tcatggagaa gaatccagat gcctacgatt acaacaaggc tcaggtgcc	2640
ggaccattga caccagaaat ggaggcacgg caggctacac ggaaaaggga gcagaaggca	2700
gcccggcggc aacgggagga acagcagcag aggcagcagg agcaggagga gcgtgaacga	2760
gaagagcagc ggcgatttgc cgccctcagt gaccgagaga agagagctct ggctgcagag	2820
cgccgactcg ctgcccagtt gggagcccct acctctccaa tccctgactc tgcaatcgtc	2880
aatactcgac gctgctggag ttgtggggca tccctccaag gcctgactcc ctttactac	2940
ctcgacttct ctttctgctc cacacgttgc ctccaggatc atcgccgtca ggcagggagg	3000
ccctcttctc gatctcttac agctctacct ggggccaaact cagggaacctg agagggcaca	3060
ttcacagcag ccctagggtt tttcttcccc gtgaaaccag agatgatttg gaagatgggg	3120
gtgaaggaca ctcgggaaact agggcaaaga cagggctaga ggtatgtgga gctsgtactg	3180
tctctggaat tttaatcaca ataaagtttg gcaaggaatg tgtacttgta cttacattca	3240
gaggcactgt ggcccttagt tccttagggc caccgtggcc agcaccaagg gatcctgcc	3300
actccatgtc ccagggtccaa gggttacttt tttttttttt tttttttttt gagatggagt	3360
gtctcactgt cagccaggct ggagtgagc ggtacaacct ccactcactg caacctctgc	3420
ctcctggatt caagcaattc tcctgcccctc agcctcccaa gtagctggga ttagaggtgc	3480
ccaccatcac gccgggctaa tttttgtatt tttttgagat ggagtgtctc actgtcagcc	3540
aggctggagt gcagtggcac aatctcggct cactgcaacc tctgcctccg agattcaagc	3600
gattctcc	3608

<210> 34
 <211> 3550
 <212> DNA
 <213> Homo sapien

<400> 34	
gcgaattggg cctctagacg catgctctag caggcggcgc agtgctgctg aaaggaccaa	60
tcgacctgag gacttgcgag ccgctcagct cccgggacgt ttggagctgc tgctaaataa	120
tttctgctca gccatgtcgc cggctccaga tgcagccccg gctcctgctc cgatctccct	180
gtttgacctc agcgcggatg ctccggtctt tcagggcctg agcctggtga gccacgcgcc	240
tggggagggt ctggcccggg ctccgcgtac ttctgttca ggctcagggg agagagaaag	300
cccagaaaga aagctactcc agggtcctat ggatatttca gagaagttat tttgttcaac	360
ttgtgaccag accttccaga accaccaaga acagaggga cattataagc ttgactggca	420
tcggtttaac ctaaagcaac gtctcaagga caagcctctc ctgtctgccc tggactttga	480
aaagcagagc tccacaggag atctttccag catctcggga tcagaagact cagactcagc	540

cagtgaggag gacttgacaga cactggatcg ggagagggct acatttgaga agttgagccg	600
acccccaggc ttttacccctc atcgagttct tttccagaat gccagggcc agtttcttta	660
tgcctaccgc tgtgtcctag gccctcatca ggatcccca gaagaggcag aactgctgct	720
acagaacctg caaagtagag gtcccagaga ctgctgggtg ctcatggctg cagctgggca	780
ctttgctggt gctatatattc aaggaagaga agtggtgaca cacaaaactt ttcaccgcta	840
tacggttcgg gccaaagcggg gcacagccca ggggcttcgg gatgcccgag gtggggccatc	900
acactctgct ggagccaacc tgaggcgcta caatgaagcc acactatata aggatgttcg	960
tgacctgctg gcagggccaa gctgggctaa ggcgctgsag gaggctggtg caatactgtt	1020
gcgtgctccc cgctctggcc ggtctttgtt ctttggaggc aaggagcac ccctgcaaag	1080
gggggatccc cgactttggg atatccccct cgccaccgc agaccacct tccaagagct	1140
acagcgtgtg ctccataagc tgaccacttt gcatgtctat gaagaagacc ctcggaagc	1200
agtcagactg cactcacctc agacacactg gaaaacagta agagaggaga gaaagaagcc	1260
tactgaggaa gaaataagaa agatctgcag ggatgaaaag gaagcgtgg ggcagaatga	1320
ggaatctccc aaacagggtt tgattactat ctggcaactg tcagatctga gtttctgtcc	1380
taaaaatgca ctggcaaatt ccctactctc ataactgacc catttcctta ttraaacaca	1440
caccacagct gtctatctta gcaattactg agacatgttt agtgaccttt ccaaattctat	1500
tatctctttt gttatggatg tttcccaga gctaagaaaa tctttgtgtg gagcagatgc	1560
gtggatgtgt tgcattgatc tcacatagtt tatctttgat tggatgctgt ggtttgaggc	1620
tgagggtgct tccatgctt tctctattg tgccgcacc taaggctact catacggaga	1680
gtccagggac ttgttcttgt ctgggtgag agcctcattt ctgcatgtga tataatggac	1740
tcagctcttg atgtgctact tttatctggg tgacaaaata aaaacaattt catttcaggc	1800
tttcattctt atgcatctgc ttctaccctc tgagtactcc ctatagtgat ttcacatgtc	1860
aggtttttcc ctaggttcag ggtcggaggg agaagatggc tttcaggtag agttggagct	1920
agtggagtgt actgtgggga ctctggtctt ttgtgagtct gaagtattgc ccaagcggag	1980
gaggagaaaa aggaataaga aggagaaaag ccgagaccag gaggctgggg cacatcggac	2040
tcttctccag caaactcaag aagaggagcc ttccacacag tcatcccagg cagttgctgc	2100
ccccttgggc cctttgctgg atgaggccaa agcccctggt cagccagagc tctggaatgc	2160
actgcttgct gcttgccgag ctggagatgt tggagtgtta aagctgcagc tagctccag	2220
ccctgcagac cctagagttc tgtctctgct cagtgtcccc ttgggtccg gtggctttac	2280
tctctgcat gcagcagctg cagctggaag aggtcagtg gttcgtctgc tgctggaagc	2340

60

agggactctc gggcccggcc accttatact gttgcggtcg acaaataaac acgtaattgag 2400
 ttccgaagggt tcatggagaa gaatccagat gcctacgatt acaacaaggc tcagggtcatc 2460
 tggaatagga aggacaagca gagtgggaag gcatcacaga tcctggctag atccttttcta 2520
 cttcttgcag tttttacaaa gataacttat agggctttat atttgaaatc ctccagggtgc 2580
 caggaccatt gacaccagaa atggaggcac ggcaggctac acggaaaagg gaggcagaagg 2640
 cagccccggcg gcaacgggag gaacagcagc agaggcagca ggagcaggag gaggcgtgaac 2700
 gagaagagca gcggcgattt gccgccctca gtgaccgaga gaagagagct ctggctgcag 2760
 agcgccgact cgctgcccag ttgggagccc ctacctctcc aatccctgac tctgcaatcg 2820
 tcaatactcg acgtgtctgg agttgtgggg catccctcca aggcctgact ccctttcact 2880
 acctcgactt ctctttctgc tccacacgtt gcctccagga tcatcgccgt caggcagggga 2940
 ggccctcttc ctgatctctt acagctctac ctggggccaa ctcagggaac tgagagggca 3000
 cattcacagc agccctaggt tttttcttcc ccgtgaaacc agagatgatt tggaagatgg 3060
 ggggtgaagga cactcgggaa ctagggcaaa gacagggcta gaggatatgtg gagctgggtac 3120
 tgtctctgga attttaatca caataaagtt tggcaaggaa tgtgtacttg tacttacatt 3180
 cagaggcact gtggccttta gttccttagg gtcaccgtgg ccagcaccaa gggatcctgc 3240
 ccactccatg tcccagggtc aagggttact tttttttttt tttttttttt ttgagatgga 3300
 gtgtctcact gtcagccagg ctggagtga gtgtacaac ctccactcac tgcaacctct 3360
 gcctcctgga ttcaagcaat tctcctgcc ttagcctccc aagtagctgg gattagaggt 3420
 gccaccatc acgcccggct aatttttcta tttttttgag atggagtgtc tcaactgtcag 3480
 ccaggctgga gtgcagtggc acaatctcgg ctactgcaa cctctgcctc cgagattcaa 3540
 gcgattctcc 3550

<210> 35

<211> 3562

<212> DNA

<213> Homo sapien

<400> 35

gcgaattggg cctctagacg catgctctag caggcggcgc agtggtgctgg aaaggaccaa 60
 tcgacctgag gacttgcgag ccgctcagct cccgggacgt ttggagctgc tgctaaataa 120
 tttctgctca gccatgtcgc cggctccaga tcagccccg gctcctgcgt cgatctccct 180
 gtttgacctc agcgcggtatg ctccggtctt tcagggcctg agcctgaggg aacattataa 240
 gcttgactgg catcggttta acctaaagca acgtctcaag gacaagcctc tcctgtctgc 300
 cctggacttt gaaaagcaga gctccacagg agatctttcc agcatctcgg gatcagaaga 360

61

ctcagactca gccagtgagg aggacttgca gacactggat cgggagaggg ctacatttga 420
gaagttgagc cgacccccag gcttttacct tcatcgagtt cttttccaga atgccaggg 480
ccagtttctt tatgcctacc gctgtgtcct aggcctcat caggatcccc cagaagaggc 540
agaactgctg ctacagaacc tgcaaagtag aggtcccaga gactgcgtgg tgctcatggc 600
tgcagctggg cactttgctg gtgctatatt tcaaggaaga gaagtgggta cacacaaaac 660
ttttcaccgc tatacgggtc gggccaagcg gggcacagcc caggggcttc gggatgcccg 720
aggtggggca tcacactctg ctggagccaa cctgaggcgc tacaatgaag ccacactata 780
taaggatggt cgtgacctgc tggcagggcc aagctgggct aaggcgctgg aggaggctgg 840
tacaatactg ttgcgtgctc cccgctctgg ccggtctttg ttctttggag gcaagggagc 900
acctctgcaa aggggggagc cccgactttg ggatatcccc ctgccacccc gcagacccac 960
cttccaagag ctacagcgtg tgctccataa gctgaccact ttgcatgtct atgaagaaga 1020
ccctcgggaa gcagtcagac tgcactcacc tcagacacac tggaaaacag taagagagga 1080
gagaaagaag cctactgagg aagaaataag aaagatctgc agggatgaaa aggaagcgct 1140
ggggcagaat gaggaatctc ccaaacaggg tttgattact atctggcaac tgtcagatct 1200
gagtttctgt cctaaaaatg cactggcaaa ttccctactc tcataactga cccatttctt 1260
tatttaaaca cacaccaca gtgtctatct tagcaattac tgagacatgt ttagtgacct 1320
ttccaaatct attatctctt ttgttatgga tgtttcccca gagctaagaa aatctttgtg 1380
tgagcagat gcgtggatgt gttgcatgga tctcacatag tttatctttg attggatgct 1440
gtggtttgag gctgagggtc gcttccatgc tttcctctat tgtgcggcac cctaaggcta 1500
ctcatacgga gagtccaggg acttgttctt gtctgggctg agagcctcat ttctgcatgt 1560
gatataatgg actcagctct tgatgtgcta cttttatctg ggtgacaaaa taaaaacaat 1620
ttcatttcag gctttcatc ttatgcatct gcttctacce tctgagtact ccctagatgg 1680
atttcacatg tcaggttttt ccctagggtc agggctcgag ggagaagatg gctttcaggt 1740
agagttggag ctagtggagt tgactgtggg gactctggat ctttgtgagt ctgaagtatt 1800
gcccagcgg aggaggagaa aaaggaataa gaaggagaaa agccgagacc aggaggctgg 1860
ggcacatcgg actcttctcc agcaaaactca agaagaggag ccttccacac agtcatccca 1920
ggcagttgct gcccccttgg gccctttgct gsatgaggcc aaagccctg gtcagccaga 1980
gctctggaat gcactgcttg ctgcttgccg agctggagat gttggagtgc taaagctgca 2040
gctagctccc agcctgcag accctagagt tctgtctctg ctcaagtccc ccttgggctc 2100
cgggtggctt actctcctgc atgcagcagc tgcagctgga agaggctcag tggttcgtct 2160
gctgctggaa gcagggtgctg accccactgt gcagtgagta aaggccccca tctgagtca 2220

ttttggtat agagaggata atttggaggt taaagttggc attggctact tggcaatatt 2280
 cccttggctc ggttsggtga tgttgggaaa ggcaggaggc aagttaaacc catttttggg 2340
 gtttttgcac ctagggactc tcggggcccg ccacctata ctgttgccgc tgacaaatca 2400
 acacgtaatg agttccgaag gttcatggag aagaatccag atgcctacga ttacaacaag 2460
 gctcaggtca tctggaatag gaaggacaag cagagtggga aggcatacaca gatcctggct 2520
 agatcctttc tacttcttgc agttttacca aagataactt atagggtctt atatttgaaa 2580
 tcctccaggt gccaggacca ttgacaccag aaatggaggc acggcaggct acacggaaaa 2640
 gggagcagaa ggcagcccg cggaacggg aggaacagca gcagaggcag caggagcagg 2700
 aggagcgtga acgagaagag cagcggcgat ttgccgccct cagtgaccga gagaagagag 2760
 ctctggctgc agagcgccga ctgctgccc agttgggagc cctacctct ccaatccctg 2820
 actctgcaat cgtcaatact cgacgctgct ggagtctgtg ggcatccctc caaggcctga 2880
 ctccctttca ctacctgac ttctctttct gctccacacg ttgcctccag gatcatcgcc 2940
 gtcaggcagg gaggccctct tctgatctc ttacagctct acctggggcc aactcaggga 3000
 cctgagaggg cacattcaca gcagccctag gttttttctt ccccgtagaa ccagagatga 3060
 tttggaagat ggggggtgaag gacactcggg aactagggca aagacagggc tagaggtagt 3120
 tggagctggt actgtctctg gaattttaat cacaataaag tttggcaagg aatgtgtact 3180
 tgtacttaca ttcagaggca ctgtggcctt tagttcctta gggtcaccgt ggccagcacc 3240
 aagggatcct gccactcca tgtcccaggt ccaagggtta cttttttttt tttttttttt 3300
 ttttgagatg gagtgtctca ctgtcagcca ggctggagtg cagtggtaga acctccactc 3360
 actgcaacct ctgcctcctg gattcaagca attctcctgc cctcagcctc ccaagtagct 3420
 gggattagag gtgccacca tcacgcccg ctaatttttg tttttttttg agatggagtg 3480
 tctcactgtc agccaggctg gagtgcagtg gcacaatctc ggctcactgc aacctctgcc 3540
 tccgagattc aagcattct cc 3562

<210> 36
 <211> 4502
 <212> DNA
 <213> Homo sapien

<400> 36
 gcgaattggg cctctagacg catgctctag caggcggcgc agtgtgctgg aaaggaccaa 60
 tcgacctgag gacttgcgag ccgctcagct cccgggacgt ttggagctgc tgctaaataa 120
 tttctgctca gccatgtcgc cggctccaga tgcagcccg gctcctgcgt cgatctccct 180
 gtttgacctc agcgcggatg ctccggtctt tcagggcctg agcctgggtga gccacgcgcc 240

tggggagggt ctggcccggg ctccgcgtac ttctgttca ggctcagggg agagagaaag	300
cccagaaaga aagctactcc agggtcctat ggatatattca gagaagttat ttgtttcaac	360
ttgtgaccag accttccaga accaccaaga acagagggaa cattataagc ttgactggca	420
tgggtttaac ctaaagcaac gtctcaagga caagcctctc ctgtctgccc tggactttga	480
aaagcagagc tccacaggag atctttccag catctcggga tcagaagact cagactcagc	540
cagtgaggag gacttgaga cactggatcg ggagagggct acatttgaga agttgagccg	600
accccaggc ttttaccctc atcgagtctt tttccagaat gccagggcc agtttcttta	660
tgcctaccgc tgtgtcctag gccctcatca gaggcaagtg acagtacagg ttgcatggct	720
aaccccagcc ttttgtacac ccagcctaga tttcccttag cctagtgcac ttctccctgc	780
ttctcttcct tcctgttggt tgtgggtatc acgcttgaca acatagtctt gaattgaaac	840
tggcctgaat tgtggaaggg ttaagtgtaa tggaaattaag tttggaaaca aaccaattta	900
ggtttgaatt gtgattctac cacttcatct tgactgcctc gccaaagcctc aaatttcctt	960
gtttgtcaaa tggaaacaag cctcagggtg gtaatatata atgagataat gtttgtgaaa	1020
attggccctt agtttcttgc tctcagttaa tgcaacagat atgtttctga tgccttcttg	1080
tcatcaagga tccccagaa gaggcagaac tgctgctaca gaacctgcaa agtagaggtc	1140
ccagagactg cgtgggtgctc atggctgcag ctgggcactt tgctggtgct atatttcaag	1200
ggtgagaggg tgctgcatcg gggtaaggat ggagtggatc ctgttagcca gggagcacca	1260
gctgggtctc agtactgagt ctgtgctgtc tacagaagag aagtgggtgac acacaaaact	1320
tttcaccgct atacggttcg ggccaagcgg ggcacagccc aggggcttcg ggatgccga	1380
ggcgggcat cactctctgc tggagccaac ctgaggcgct acaatgaagc cacttatat	1440
aaggtagatt aagcctttta gatctgggtg tactgatcca tacttttttt gcatctctgt	1500
tcaactcact gtaagtagg gaggtttttg actcatatcc ttccaatttt cattataggt	1560
agacaaaggt agatgaggga tccccagga gccttagtcc tctattcttt ctccgtgtta	1620
tcctctactt tccacccctt gacttctgt gggccatttt ttttagttgg agatttataa	1680
atagcaagtg aaggtagtga ggactgagtt actctcttct ctaggatgtt cgtgacctgc	1740
tggcagggcc aagctgggct aaggcgctgg aggaggctgg tacaatactg ttgcgtgctc	1800
cccgtcttg ccggtctttg ttctttggag gcaaggagc acccctgcaa aggggggac	1860
cccgactttg ggatatcccc ctgccaccc gcagacccac cttccaagag ctacagcgtg	1920
tgctccataa gctgaccact ttgcatgtct atgaagaaga ccctcgggaa gcagtcagac	1980
tgcactcacc tcagacacac tggaaaacag taagagagga gagaaagaag cctactgagg	2040

64

aagaaataag aaagatctgc agggatgaaa aggaagcgct ggggcagaat gaggaatctc	2100
ccaaacaggg ttgtattact atctggcaac tgtcagatct gagtttctgt cctaaaaatg	2160
cactggcaaa ttccctactc tcataactga cccatttcct tatttaaaca cacaccaca	2220
gtgtctatct tagcaattac tgagacatgt ttagtgacct ttccaaatct attatctctt	2280
ttgttatgga tgtttcccca gagctaagaa aatctttgtg tggagcagat gcgtggatgt	2340
gttgcacatgga tctcacatag tttatctttg attggatgct gtggtttgag gctgagggt	2400
gcttccatgc tttcctctat tgtgcggcac cctaaggcta ctcatcggga ggtccaggg	2460
acttgttctt gtctgggctg agagcctcat ttctgcatgt gatataatgg actcagctct	2520
tgatgtgcta cttttatctg ggtgacaaa taaaaacaat ttcatctcag gctttcattc	2580
ttatgcatct gcttctaccc tctgagtact ccctagatgg atttcacatg tcagggtttt	2640
ccctagggtc agggtcggag ggagaagatg gctttcaggt agagttggag ctagtggagt	2700
tgactgtggg gactctggat ctttgtgagt ctgaagtatt gcccaagcg aggaggagaa	2760
aaaggaataa gaaggagaaa agccgagacc agggaggctgg ggcacatcgg actcttctcc	2820
agcaaactca agaagaggag ccttcacac agtcatccca ggcagttgct gccccctgg	2880
gccccctgct ggatgaggcc aaagccccctg gtcagccaga gctctggaat gcactgcttg	2940
ctgcttgccg agctggagat gttggagtgc taaagctgca gctagctccc agccctgcag	3000
accctagagt tctgtctctg ctcatgccc ccttgggctc cggctggctt actctcctgc	3060
atgcagcagc tgcagctgga agaggctcag tggttcgtct gctgctggaa gcagggtgctg	3120
acccactgt gcagtgagta aaggctccca tcctgagtca ttttgggtat agagaggata	3180
atgtggaggt taaagtggc attggctact tggcaatatt cccttggctt ggttgggtga	3240
tgttgggaaa ggcaggaggc aagttaaacc catTTTTTga gtttttgac ctagggactc	3300
tggggcccg ccacctata ctgttgccg tgacaaatca acacgtaatg agttccgaag	3360
gttcatggag aagaatccag atgcctacga ttacaacaag gctcaggtca tctggaatag	3420
gaaggacaag cagagtggga aggcatacaca gatcctggct agatcctttc tacttcttgc	3480
agttttacca aagataactt atagggtctt atatttgaaa tcctccaggt gccaggacca	3540
ttgacaccag aaatggaggc acggcaggct acacggaaaa gggagcagaa ggcagcccg	3600
cggcaacggg aggaacagca gcagaggcag caggagcagg aggagcgtga acgagaagag	3660
cagcggcgat ttgccgccct cagtgaccga gagaagagag ctctggctgc agagcgccga	3720
ctcgctgccc agttgggagc ccctacctct ccaatccctg actctgcaat cgtcaatact	3780
cgacgctgct ggagttgtgg ggcacccctc caaggcctga ctccctttca ctacctgac	3840
ttctctttct gctccacacg ttgcctccag gatcatcgcc gtcaggcagg gaggccctct	3900

65

```

tcttgatctc ttacagctct acctggggcc aactcagggc cctgagaggg cacattcaca 3960
gcagccctag gttttttctt ccccgtagaa ccagagatga tttggaagat gggggtagaag 4020
gacactcggg aactagggca aagacagggc tagaggtatg tggagctggg actgtctctg 4080
gaattttaat cacaataaag tttggcaagg aatgtgtact tgtacttaca ttcagaggca 4140
ctgtggcctt tagttcctta gggtcaccgt ggccagcacc aagggatcct gccactcca 4200
tgtccaggtt ccaaggggta cttttttttt tttttttttt ttttgagatg gagtgtctca 4260
ctgtcagcca ggctggagtg cagtgggtaca acctccactc actgcaacct ctgcctcctg 4320
gattcaagca attctcctgc cctcagcctc ccaagtagct gggattagag gtgcccacca 4380
tcacgcccgg ctaatttttg tatttttttg agatggagtg tctcactgtc agccaggctg 4440
gagtgcagtg gcacaatctc ggctcactgc aacctctgcc tccgagattc aagcgattct 4500
cc 4502

```

```

<210> 37
<211> 3316
<212> DNA
<213> Homo sapien

```

```

<400> 37
gcgaattggg cctctagacg catgctctag caggcggcgc agtgtgctgg aaaggaccaa 60
tcgacctgag gacttgcgag ccgctcagct cccgggacgt ttggagctgc tgctaaataa 120
tttctgtctc gccatgtcgc cggctccaga tgcagccccg gctcctgctg cgatctccct 180
gtttgacctc agcgcggatg ctccggtctt tcagggcctg agcctgggtg gccacgcgcc 240
tggggaggct ctggcccggg ctccgcgtac ttctgttca ggctcagcgg agagagaaag 300
cccagaaaag aagctactcc agggtcctat ggatatttca gagaagtat tttgttcaac 360
ttgtgaccag accttcaga accaccaaga acagagggaa cattataagc ttgactggca 420
tcggtttaac ctaaagcaac gtctcaagga caagcctctc ctgtctgccc tggactttga 480
aaagcagagc tccacaggag atctttccag catctcggga tcagaagact cagactcagc 540
cagtgaggag gacttgaga cactggatcg ggagagggct acatttgaga agttgagccg 600
accccaggc ttttaccctc atcgagttct tttccagaat gccaggggcc agtttcttta 660
tgctaccgc tgtgtcctag gccctcatca ggatccccca gaagaggcag aactgctgct 720
acagaacctg caaagtagag gtcccagaga ctgcgtggcg ctcatggctg cagctgggca 780
ctttgctggg gctatatttc aaggaagaga agtgggtgaca caaaaactt ttcaccgcta 840
tacggttcgg gccaaagcgg gcacagccca ggggcttcgg gatgcccag gtgggccatc 900
acactctgct ggagccaacc tgaggcgcta caatgaagcc aactatata aggatgttcg 960

```

tgacctgctg gcagggccaa gctgggctaa ggcgctggag gaggctggta caatactgtt	1020
gcgtgctccc cgctctggcc ggtctttgtt ctttggaggc aaggggagcac ccctgcaaag	1080
gggggatccc cgactttggg atatccccct cgccaccgc agacccacct tccaagagct	1140
acagcgtgtg ctccataagc tgaccacttt gcatgtctat gaagaagacc ctcggaagc	1200
agtcagactg cactcacctc agacacactg gaaaacagta agagaggaga gaaagaagcc	1260
tactgaggaa gaaataagaa agatctgcag gtagaaaaa gaagcgctgg ggcagaatga	1320
ggaatctccc aaacagggtt tgattactat ctggcaactg tcagatctga gtttctgtcc	1380
taaaaatgca ctggcaaatt ccctactctc ataactgacc catttcctta tttaaacaca	1440
caccacagt gtctatctta gcaattactg agacatgttt agtgaccttt ccaaatctat	1500
tatctctttt gttatggatg tttccccaga gctaagaaaa tcttgtgtg gagcagatgc	1560
gtggatgtgt tgcattgac tcacatagtt tatctttgat tggatgctgt ggtttgaggc	1620
tgagggctgc ttccatgctt tctctattg tgcggcacc taaggctact catacggaga	1680
gtccagggac ttgttcttgt ctgggctgag agcctcatct ctgcatgtga tataatggac	1740
tcagctcttg atgtgctact tttatctggg tgacaaaata aaaacaattt catttcaggc	1800
tttcattctt atgcatctgc ttctaccctc tgagtactcc ctagatggat ttccatgtc	1860
aggtttttcc ctaggttcag ggtcggaggg agaagatggc tttcaggtag agttggagct	1920
agtggagtgt actgtgggga ctctggatct ttgtgagct gaagtattgc ccaagcggag	1980
gaggagaaaa aggaataaga aggagaaaag ccgagaccag gaggctgggg cacatcggac	2040
tcttctccag caaactcaag aagaggagcc ttccacacag tcatcccagg cagtgtctgc	2100
ccccttgggc cctttgtgg atgaggccaa agcccctggc cagccagagc tctggaatgc	2160
actgcttgct gcttgccgag ctggagatgt tggagtgtta aagctgcagc tagctcccag	2220
ccctgcagac cctagagttc tgtctctgct cagtgcctcc ttgggctccg gtggctttac	2280
tctcctgcat gcagcagctg cagctggaag aggctcagtg gttcgtctgc tgctggaagc	2340
agggtgccagg accattgaca ccagaaatgg aggcacggca ggctacacgg aaaaggagc	2400
agaaggcagc ccggcggcaa cgggaggaac agcagcagag gcagcaggag caggaggagc	2460
gtgaacgaga agagcagcgg cgatttgccg ccctcagtg cagagagaag agagctctgg	2520
ctgcagagcg ccgactcgt gccagttgg gagccctac ctctccaatc cctgactctg	2580
caatcgtcaa tactcgagc tgctggagtt gtggggcatc cctccaaggc ctgactccct	2640
ttcactacct cgacttctct ttctgtcca cacttgctt ccaggatcat cgccgtcagg	2700
cagggaggcc ctcttctga tctcttacag ctctacctgg ggccaactca gggacctgag	2760

67

```

agggcacatt cacagcagcc ctaggttttt tcttccccgt gaaaccagag atgatttggg 2820
agatgggggt gaaggacact cgggaactag ggcaaagaca gggctagagg tatgtggagc 2880
tggtactgtc tctggaattt taatcacaat aaagtttggc aaggaatgtg tacttgtact 2940
tacattcaga ggcactgtgg ccttttagttc cttaggggtca ccgtggccag caccaagggg 3000
tcctgcccac tccatgtccc aggtccaagg gttacttttt tttttttttt ttttttttga 3060
gatggagtgt ctactgtca gccaggctgg agtgcagtgg tacaacctcc actcactgca 3120
acctctgctt cctggattca agcaattctc ctgccctcag cctcccaagt agctgggatt 3180
agaggtgccc accatcacgc cgggctaatt tttgtatttt tttgagatgg agtgtctcac 3240
tgtcagccag gctggagtgc agtggcacia tctcgggtca ctgcaacctc tgcctccgag 3300
attcaagcga ttctcc 3316

```

```

<210> 38
<211> 4629
<212> DNA
<213> Homo sapien

```

```

<400> 38
gcgaattggg cctctagacg catgctctag caggcggcgc agtgtgctgg aaaggaccaa 60
tcgacctgag gacttgcgag ccgctcagct cccgggacgt ttggagctgc tgctaaataa 120
tttctgtctc gccatgtcgc cggctccaga tgcagccccg gctcctgcgt cgatctccct 180
gtttgacctc agcgccgatg ctccgggtctt tcagggcctg agcctgggtg gccacgcgcc 240
tggggaggct ctggccccgg ctccgcgtac ttctgtttca ggctcagggg agagagaaaag 300
cccagaaaag aagctactcc agggctctat ggatatttca gagaagtat tttgttcaac 360
ttgtgaccag accttccaga accaccaaga acagagggaa cattataagc ttgactggca 420
tcgggttaac ctaaagcaac gtctcaagga caagcctctc ctgtctgccc tggactttga 480
aaagcagagc tccacagggt atgagtggta gggggaccta tgtaggagta ggacatggag 540
gtataagaaa gcactagtgt agagtttgag gaaagaacaa aaatggggta ccaaacttgt 600
gtatctcata ttgtctgtct tcaggagatc tttccagcat ctgggatca gaagactcag 660
actcagccag tgaggaggac ttgcagacac tggatcggga gagggctaca tttgagaagt 720
tgagccgacc cccaggcttt taccctcatc gagttctttt ccagaatgcc cagggccagt 780
ttctttatgc ctaccgtgt gtctagggc ctcatcagag gcaagtgaca gtacaggttg 840
catggctaac cccagccttt tgtacacca gcctagatct cccttagcct agtgcatttc 900
tccctgcttc tcttccctcc tgttggttgt gggatcacg cttgacaaca tagtcttgaa 960
ttgaaactgg cctgaattgt ggaagggtta agtgtaatgg aattaagttt ggaaacaaac 1020

```

68

caatttaggt ttgaattgtg attctaccac ttcattctga ctgcctcgcc aagcctcaaa	1080
tttccttgtt tgtcaaatgg aaacaagcct caggggtgga atattaaatg agataatgtt	1140
tgtgaaaatt ggcccttagt ttcttgctct cagtgaatgc aacagatatg tttctgatgc	1200
ttctctgtca tcaaggatcc cccagaagag gcagaactgc tgctacagaa cctgcaaagt	1260
agagggtcca gagactgctg ggtgctcatg gctgcagctg ggcactttgc tgggtgctata	1320
tttcaagggt gagaggggtc tgcattgggg taaggatgga gtggatcctg ttagccaggg	1380
agcaccagct ggtctccagt actgagtctg tgctgtctac agaagagaag tgggtgacaca	1440
caaaactttt caccgctata cgggttcgggc caagcggggc acagcccagg ggcttcggga	1500
tgcccagggt gggccatcac actctgctgg agccaacctg aggcgctaca atgaagccac	1560
actatataag gtgagtttaag ccttttagat ctgggtggtac tgatccatac tttttttgca	1620
tctctgttca actcactgtt aagtagggag gtttttgact catatccttc caattttcat	1680
tataggtaga caaaggtaga tgagggattc cccaggagcc ttagtcctct attctttctc	1740
cgtgttatcc tctactttcc accccttgca cttctgtggg ccattttttt tagttggaga	1800
tttataaata gcaagtgaag gtatgcagga ctgagttact ctcttctcta ggatgttcgt	1860
gacctgctgg cagggccaag ctgggctaag gcgctggagg aggctggtac aatactgttg	1920
cgtgctcccc gctctggccg gtctttgttc tttggaggca agggagcacc cctgcaaagg	1980
ggggatcccc gactttggga tatccccctc gccacccgca gaccacctt ccaagagcta	2040
cagcgtgtgc tccataagct gaccactttg catgtctatg aagaagaccc tcgggaagca	2100
gtcagactgc actcacctca gacacactgg aaaacagtaa gagaggagag aaagaagcct	2160
actgaggaag aaataagaaa gatctgcagg gatgaaaagg aagcgtggg gcagaatgag	2220
gaatctccca aacaggggtt gattactatc tggcaactgt cagatctgag tttctgtcct	2280
aaaaatgcac tggcaaattc cctactctca taactgacct atttccttat ttaaacacac	2340
accacagtg tctatcttag caattactga gacatgttta gtgaccttc caaatctatt	2400
atctcttttg ttatggatgt tccccagag ctaagaaaat ctttgtgtgg agcagatgag	2460
tggatgtgtt gcatggatct cacatagttt atctttgatt ggatgctgtg gtttgaggct	2520
gagggctgct tccatgcttt cctctattgt gcggcacctt aaggctactc atacggagag	2580
tccagggact tgttcttgtc tgggctgaga gcctcatttc tgcatgtgat ataatggact	2640
cagctcttga tgtgctactt ttatctgggt gacaaaataa aaacaatttc atttcaggct	2700
ttcattctta tgcattctgt tctaccctct gactactccc tagatggatt tcacatgtca	2760
ggtttttccc taggttcagg gtcggaggga gaagatggct ttcaggtaga gttggagcta	2820
gtggagttga ctgtggggac tctggatctt tgtgagtctg aagtattgcc caagcggagg	2880

aggagaaaaa ggaataagaa ggagaaaagc cgagaccagg aggcctggggc acatcggact	2940
cttctccagc aaactcaaga agaggagcct tccacacagt catcccaggc agttgctgcc	3000
cccttggggc ctttgctgga tgaggccaaa gccctgggc agccagagct ctggaatgca	3060
ctgcttgctg cttgccgagc tggagatgtt ggagtgctaa agctgcagct agctcccagc	3120
cctgcagacc ctagagttct gtctctgtc agtgccccct tgggctccgg tggctttact	3180
ctcctgcatg cagcagctgc agctggaaga ggctcagtgg ttcgtctgct gctggaagca	3240
gggtgctgacc ccactgtgca gtgagtaaag gtccccatcc tgagtcattt tgggtataga	3300
gaggataatt tggaggttaa agttggcatt ggctacttgg caatattccc ttggtctggt	3360
tgggtgatgt tgggaaaggc aggaggcaag ttaaaccat ttttggagtt tttgcacct	3420
gggactctcg ggcccggcca ccttatactg ttgcggctga caaatcaaca cgtaatgagt	3480
tccgaagggt catggagaag aatccagatg cctacgatta caacaaggct caggcatct	3540
ggaaataggaa ggacaagcag agtgggaagg catcacagat cctggctaga tcccttctac	3600
ttcttgagct tttaccaaag ataactata gggcttata tttgaaatcc tccagtgcc	3660
aggaccattg acaccagaaa tggaggcacg gcaggctaca cggaaaaggg agcagaaggc	3720
agcccggcgg caacgggagg aacagcagca gaggcagcag gagcaggagg agcgtgaacg	3780
agaagagcag cggcgatttg ccgccctcag tgaccgagag aagagagctc tggctgcaga	3840
gcgcccactc gctgcccagt tgggagcccc tacctctcca atccctgact ctgcaatcgt	3900
caactactga cgctgctgga gttgtggggc atccctccaa ggctgactc cctttcacta	3960
cctcgacttc tctttctgct ccacacgttg cctccaggat catcgccgtc aggcaggag	4020
gccctcttcc tgatctctta cagctctacc tggggccaac tcagggaacct gagaggcac	4080
attcacagca gccctaggtt ttttcttccc cgtgaaacca gagatgattht ggaagatggg	4140
gggtgaaggac actcgggaac tagggcaaag acagggctag aggtatgtgg agctggtact	4200
gtctctggaa ttttaatcac aataaagttt ggcaaggaaat gtgtacttgt acttacattc	4260
agaggcactg tggcccttag ttccttaggg tcaccgtggc cagcaccaag ggatcctgcc	4320
cactccatgt ccaggtcca agsgttactt tttttttttt tttttttttt tgagatggag	4380
tgtctcactg tcagccaggc tggagtgcag tggtaacaac tccactcact gcaacctctg	4440
cctcctggat tcaagcaatt ctctgccct cagcctccca agtagctggg attagagggtg	4500
cccaccatca cggccggcta atttttgtat ttttttgaga tggagtgtct cactgtcagc	4560
caggctggag tgcagtggca caatctcggc tcactgcaac ctctgcctcc gagattcaag	4620
cgattctcc	4629

<210> 39
 <211> 4090
 <212> DNA
 <213> Homo sapien

<400> 39
 gcgaattggg cctctagacg catgctctag caggcggcgc agtgtgctgg aaaggaccaa 60
 tcgacctgag gacttgcgag ccgctcagct cccgggacgt ttggagctgc tgctaaataa 120
 tttctgctca gccatgtcgc cggctccaga tgcagccccg gctcctgctg cgatctccct 180
 gtttgacctc agcgcggatg ctccggctct tcagggcctg agcctgggtga gccacgcgcc 240
 tggggagggt ctggcccggg ctccgcgtac ttctgttca ggctcagggg agagagaaag 300
 ccagaaaga aagctactcc agggtcctat ggatatttca gagaagttat ttgttcaac 360
 ttgtgaccag accttccaga accaccaaga acagagggaa cattataagc ttgactggca 420
 tcggtttaac ctaaagcaac gtctcaagga caagcctctc ctgtctgccc tggactttga 480
 aaagcagagc tccacaggag atctttccag catctcggga tcagaagact cagactcagc 540
 cagtgaggag gacttgcaga cactggatcg ggagagggct acatttgaga agttgagccg 600
 acccccaggc ttttaccctc atogagttct tttccagaat gccagggcc agtttcttta 660
 tgcctaccgc tgtgtcctag gccctcatca ggatcccca gaagaggcag aactgctgct 720
 acagaacctg caaagtagag gtcccagaga ctgcgtggtg ctcatggctg cagctgggca 780
 ctttgcctgg gctatatttc aaggaagaga agtggtgaca cacaaaactt ttcaccgcta 840
 tacggttcgg gccaaagcgg gcacagccca ggggcttcgg gatgcccgag gtgggccatc 900
 acactctgct ggagccaacc tgaggcgcta caatgaagcc acactatata aggatgttcg 960
 tgacctgctg gcagggccaa gctgggctaa ggcgctggag gaggctggta caatactgtt 1020
 gcgtgctccc cgctctggcc ggtctttgtt ctttggaggc aaggagcac ccctgcaaag 1080
 gggggatccc cgactttggg atatccccct cgccaccgc agaccacct tccaagagct 1140
 acagcgtgtg ctccataagc tgaccacttt gcatgtctat gaagaagacc ctcggaagc 1200
 agtcagactg cactcacctc agacacactg gaaaacagta agagaggaga gaaagaagcc 1260
 tactgaggaa gaaataagaa agatctgcag ggatgaaaag gaagcgtgg ggcagaatga 1320
 ggaatctccc aaacagggtt tgattactat ctggcaactg tcagatctga gtttctgtcc 1380
 taaaaatgca ctggcaaatt ccctactctc ataactgacc catttcctta tttaaacaca 1440
 caccacagt gtctatctta gcaattactg agacatgttt agtgacctt ccaaacttat 1500
 tatctctttt gttatggatg tttccccaga gctaagaaaa tctttgtgtg gagcagatgc 1560
 gtggatgtgt tgcattggtc tcacatagtt tatctttgat tggatgctgt ggtttgagsc 1620

71

tgagggtgc	ttccatgctt	tccctctattg	tgccggcacc	taaggctact	catacggaga	1680
gtccaggagac	ttgttcttgt	ctgggctgag	agcctcattt	ctgcatgtga	tataatggac	1740
tcagctcttg	atgtgctact	tttatctggg	tgacaaaata	aaaacaattt	catttcaggc	1800
tttcattctt	atgcatctgc	ttctaccctc	tgagtactcc	ctagatggat	ttcacatgtc	1860
aggtttttcc	ctaggttcag	ggtcggaggg	agaagatggc	tttcaggtag	agttggagct	1920
agtggagttg	actgtgggga	ctctggatct	ttgtgagtct	gaagtattgc	ccaagcggag	1980
gaggagaaaa	aggaataaga	aggagaaaag	ccgagaccag	gaggctgggg	cacatcggac	2040
tcttctccag	caaactcaag	aagaggagcc	ctccacacag	tcatcccagg	cagttgctgc	2100
ccccttgggc	cctttgctgg	atgaggccaa	agccccctgt	cagccagagc	tctggaatgc	2160
actgcttgct	gcttgccgag	ctggagatgt	tggagtgcta	aagctgcagc	tagctcccag	2220
ccctgcagac	cctagagttc	tgtctctgct	cagtgcctcc	ttgggctccg	gtggctttac	2280
tctcctgcat	gcagcagctg	cagctggaag	aggctcagtg	gttcgtctgc	tgctggaagc	2340
agggtgctgac	cccactgtgc	agtgaagtaa	ggccccatc	ctgagtcatt	ttgggtatag	2400
agaggataat	ttggagggtta	aagttggcat	tggctacttg	gcaatattcc	cttggtctgg	2460
ttgggtgatg	ttgggaaagg	caggaggcaa	gttaaaccac	tttttgagtg	ttttgcacct	2520
agggactctc	gggccccggc	accttatact	gttgccgctg	acaaatcaac	acgtaatgag	2580
ttccgaaggc	tcattggagaa	gaatccagat	gcctacgatt	acaacaaggc	tcaggtcctc	2640
tggaatagga	aggacaagca	gagtgggaag	gcacacacag	tcctggctag	atcctttcta	2700
cttcttgcat	ttttacaaaa	gataacttat	agggtcttat	atttgaaatc	ctccagggtc	2760
caggaccatt	gacaccagaa	atggaggcac	ggcaggctac	acggaaaagg	gagcagaagg	2820
cagccccggc	gcaacgggag	gaacagcagc	agaggcagca	ggagcaggag	gagcgtgaac	2880
gagaagagca	gcggcgattt	gccgccctca	gtgaccgaga	gaaggtagag	ctggagggtc	2940
tcttggtccat	ggcaaggcct	cctagaggtc	taaccctctc	cccagcgtgc	agctgtcacc	3000
tcttggtgct	cctactcgcc	actggggcct	tgtccttaac	acaactgtgc	tccttcagag	3060
agctctggct	gcagagcgcc	gactcgctgc	ccagttggga	gcccctacct	ctccaatccc	3120
tgactctgca	atcgtcaata	ctcggtatgg	ggcgcgggat	gagggagtgg	gtggactgta	3180
atgttgacag	gaccattggg	ggcaagagaa	atgagtacct	gcacagtatt	cagaagggtg	3240
gttgagggaa	tttgggatgt	tctggcagat	gctgcagtga	aaacagaaat	ggcaggagga	3300
gggacgggga	gagcgtggat	tggaaagttt	ctgggggtacc	tgtccagcca	tttttcttcc	3360
tcttggtcag	acgtgctggg	agttgtgggg	catccctcca	aggcctgact	ccctttcact	3420
acctcgactt	ctctttctgc	tcacacggtt	gcctccagga	tcctcgccgt	caggcaggga	3480

ggccctcttc ctgatctctt acagctctac ctggggccaa ctcagggacc tgagagggca 3540
 cattcacagc agccctaggt tttttcttcc ccgtgaaacc agagatgatt tggaagatgg 3600
 ggggtgaagga cactcgggaa ctaggggcaaa gacagggcta gaggtatgtg gagctggtag 3660
 tgtctctgga attttaatca caataaagtt tggcaaggaa tgtgtacttg tacttacatt 3720
 cagaggcact gtggccttta gttccttagg gtcaccgtgg ccagcaccaa gggatcctgc 3780
 ccactccatg tcccagggtcc aagggttact tttttttttt tttttttttt ttgagatgga 3840
 gtgtctcact gtcagccagg ctggagtgc gtggtacaac ctccactcac tgcaacctct 3900
 gcctcctgga ttcaagcaat tctcctgccc tcagcctccc aagtagctgg gattagaggt 3960
 gccaccatc acgcccggct aatttttgta tttttttgag atggagtgtc tcactgtcag 4020
 ccaggctgga gtgcagtggc acaatctcgg ctactgcaa cctctgcctc cgagattcaa 4080
 gcgattctcc 4090

<210> 40
 <211> 3770
 <212> DNA
 <213> Homo sapien

<400> 40
 ctacttgagg ggctgagatg ggtggatcgc ttgaacacag gaggttaagg ctgcagttag 60
 ccgagatcgt gccactgcac actagcctgg gcggcgggag tgagaccgtg tctcaaaaac 120
 aacaacaaca acaacaacaa caaaaaacaa aaaatggacc gaggttgggg tggcaaggct 180
 gggctggaat ggaggctgag gacaggccct gcagcgccc agggggtaga gggcgtgcag 240
 caggaagcaa gggccaccct cagggatggg ggactgggcc tggcagctgc cgaggggtag 300
 gcaggatgca tgtggagagc cacgtggggc tgcggctgag ccaaggattg tgagaggaat 360
 cctgctgctc tgggtggcag gcagaaggcc tgggccacag gtggggcctg ctggggagac 420
 cacaggtagg gcaggtagg ctgaccctgg gcgctcggca caccggtact cctcctgcct 480
 ggctgctccc tcagcagggtg tcagagtctg agtcaccttt tctcacgtg acccccacca 540
 ggaccaggca gggagggtgg catctttggc cctgactcag cctgcaggg agaagagggg 600
 ctggaggtag aggtggcctg ccactgtctc cccaacccc tgcccacctg ggtcttgtgc 660
 tgtgtgtact tctgctgcgt ctgtcctccc ttgtgaccag cttctgctgg acctgattgt 720
 ccagccatga tcttctgac atcatggttt ctggacacac atctgttga ctaaggaatt 780
 tgtgttcttg gccacagaac agtgccacct ctgcctcaag cagttcctgg tctgggcact 840
 ccccaggga ggccggagag gactgagccg tctcctgatg cagaaagtca gcccgcctgg 900
 gcagtgtctg ccagggaagt agggccccac ccaacggtgt gctgactgtg gaacactgtg 960

tctgcctagg cgggtctggc cacattcctg cagcatgatg gttggcagtt agcttcctgg	1020
agtgtggacg ggtccttccc tgctgactg acttgtccac agggcagcaa gaagatgcgc	1080
cccttggtgt gtcccagtg tctcctgtag gcagctgagc ttctgcaggt ctggctggga	1140
gccaaaggta ccaatctggg gggtaacca gccatcatct ggatgagcgt tggggtcttt	1200
ctgctctgga ttgcaggga gacgtcgttt tgtgctggtc agggccctcg cctgcctgat	1260
tcccttgag cccccaaga caggagatgg gcagatgtcc tctgaagtgg catgggctgc	1320
ttgctcactg gccttcccag gacctgccc aggtgggtgt gcttggcccc aggtcgaatt	1380
cctgtgctgg cagcaagcag gggcctgggc cgtcggctgg ctggggctca tgcagccatc	1440
ccctttgcag ccatccgggt gacctgcata ggttcctgcs gggctctcaa caaggctaatt	1500
gacacagcgt gggtagtggg ggaggggttac ttcaacagtt ccctgtcgct ggcagacaag	1560
ggtaagtttg ggagccagtt cccgagtggt gacctctggg ggcagccctt ggagtggggc	1620
ctgtctgtcc tgctctcccc ctttcctaga tctgcctctt ggatctggca ctggcccatc	1680
ttgtcccagg gttgtgggcc ctgatggctt tctcataggc gctgggtggc tgaaggggcc	1740
acctccccct tgtgtcggat ttgggtgggc tctgacctct ggcacagctg ttccacctt	1800
gccccattcc caaaccactc tctgttcaa gccaaactct tatcctcagt ccttcaccca	1860
agccacagcc ctgtgtgtgt gtggcgctgg tgactgagac agggagacct agtgtgagct	1920
ggtcagctgc agtgccact cttatcctgg ccctgtggcc acctcaggcc acctcagggg	1980
gggactgccc cccacctccc tctgtctctc gcaggagacc tgcccgtgg agagcacagc	2040
ttccccctcc agttcctgct tctggtgag agcccagcct ggacaggcct ggtgatgacc	2100
aactggctct gggaggtggg ctctgcaggg tggaaaggcag ccaggtacca gtgcctgtct	2160
tctccccagc cactgcaacc acgtcctttg agggctcctt cgggaagatc gtgcaccagg	2220
tgagggccgc catccacacg ccacggtttt ccaaggatca caagtgcagc ctcgtgttct	2280
atatcttgag cccccacttc ttggaccccg tcttctctc caccaagagc cattcgcagc	2340
ggcagccct gctggccacc ttgagttctg tgcttggtgc gccggagccc tgccctcagg	2400
atggcagccc tgcttcacac ccgtgcacc ctcccttgtg catttcaaca ggtgccactg	2460
tcccctactt tgcagagggc tccggggggc cagtgccac taccagcacc ttgattcttc	2520
ctccagagta cagttcttgg ggctaccct atggtgagtc gacagccagg gcttggcagg	2580
gaggggacgc caagagcccc acgcagacc tgctttcttc ccgcagagge cccaccgtct	2640
tatgagcaga gctgcggcgg cgtggaacct agcctgacct ctgagagctg acccgtgtct	2700
gccttctcca ggcaggcctg gcctctgccc tgggactggg gcgccaggg cctcgtgcct	2760

74

tctctcttgg cctagcctgg ccactcagg acctgcccag cctctgccag ctctcttggc 2820
 atccgccttc ttctccctgg ggctgggggtg ggggtggcag ggagctggga cctggagaga 2880
 caactcctgt aaataaaaca ctttatttgt agagctgggc ctacccggcc tcgccttggg 2940
 caccctccag cctctggcag ggctgaccc tgaccccatc ctgggctctg ctcatgccag 3000
 ggcagaccct gctcctcagg tgccccctac taccctgggg gcgcgctcag gctaccatgc 3060
 ctgggcgag cgcgggggt ggctcccttt aacagaggac gggggctggc gctgggcctt 3120
 ccagagccgc ctaaggacac gtccctggag ccgggtcat gaaatggggc ctacgcaac 3180
 cttgggtgtt ggtaaattt gtgccttggc tcctgttgcg tttaggcacc caggttccca 3240
 agcgggtgtg tgtggacct ccctgctgag aaaccgctg gcgcgtggag gggcttgcct 3300
 aggtccctcc gacaggagac cctgctccct gggccttggc ccctgctagc accactgcca 3360
 ggctggctc tgagggacgc tgctctccc ctgccacgt ctccaaggcc tgaaaggcag 3420
 ggttctgttg aacagcattt ctcaaagggt catcctgcag acgttccagc cccaggggag 3480
 gccccgtgat gctggctggc ctgcctggag ggtgcttcca gaaacaacgg agatgggtgt 3540
 gaagaaggct ctgggttcaa attccagttc tcctttaggg cgaagggtg actgtggcta 3600
 ggtttgtcag ttaccttacc tataaatgc acaggaccag gccgggcacg gtggctccct 3660
 cctgtaatcc cagtactttg ggaggtgag gcaggtgat tgcttgaggt caggagtcc 3720
 agatcagcct gggcaacata gtgaaactcc atctgtacaa aaaaaaaaaa 3770

<210> 41
 <211> 1650
 <212> DNA
 <213> Homo sapien

<400> 41
 agggaccgta ttcaagtcc tgccctccca ccagcgctg cggcccgag cagtgtccgg 60
 ctccctgccc acgcccctgga gctgggacgg cctggggcgc tggtcggccg ccttccccca 120
 gaaggaggcg tgagcggggc gtggccgga cgtctctctt cggagcccg ccccgggcgg 180
 gcacagttac gcgcgcacg gatcatggcc gcagccgctc tggggcagggt gggttcgag 240
 ccccgcccg gggctctggga aataaccggg ggaggcgac ttccgggaag accactggcc 300
 tgcagccggc ccgactcggc gccgctcctc ccgcccggg gtcccgctgc agggcgcgga 360
 ggaggatggc gcccttttga aaggagcacg aggttttaac ggggtgcagc tgtttgaggg 420
 catgaaggcg ttcaaaggca aagaccagca ggtgcgcctc ttccgcccct ggctcaacat 480
 ggaccggatg ctgcgctcag ccatgcgcct gtgcctgccg agtttcgaca agctggagtt 540
 gctggagtgc atccgccggc tcatcgaagt ggacaaggac tgggtccccg atgccgccgg 600

75

caccagcctc tatgtgcggc ctgtgctcat tgggaacgag ccctcgctgs gtgtcagcca 660
 gccacgcgc gcgtcctgt tcgtcattct ctgccagtg ggtgcctact tccctggagg 720
 ctccgtgacc ccggtctccc tcctggccga ccagccttc atccgggcct gsgtgggagg 780
 ggtcggcaac tacaagttag gtggaatta tgggccacc gtgttagtgc aacaggaggc 840
 actcaagcgg ggctgtgaac aggtcctctg gctgtatggg cccgaccacc agctcaccga 900
 ggtgggaacc atgaacatct ttgtctactg gaccacgaa gatggggtgc tggagctggt 960
 gacgcccccg ctgaatggtg ttatcctgcc tggagtggc agacagagtc tactggacat 1020
 ggctcagacc tggggtgagt tccgggtggt ggagcgcacg atcaccatga agcagttgct 1080
 gggggccctg gaggaggcc gcgtgcggga agtctttggc tcgggcaccg cttgccaggt 1140
 ctgccagtg caccgaatcc tgtacaaaga caggaacctc cacattccca ccatggaaaa 1200
 tgggcctgag ctgatcctcc gcttccagaa ggagctgaag gagatccagt acggaatcag 1260
 agcccacgag tggatgttcc cggtgtgaag ctgcaggctg tgctccagat ccaccgacct 1320
 gtagcatctc gtcacgccag cactgcctc octaccaatg actcacctga agtgcaatac 1380
 gaaataaaaag gccagcgggc ggcgtctggg tctctggcgc ccccatgtgg ttgcgacact 1440
 cccaaagccg taagggccga ccaggcctc ttggcccca gcccctcgtc gggggttcag 1500
 gtccgcccac tactccttgt cgtgcgggtc aggatacacc ttggccccga ttccggtatc 1560
 ctccgttctc aggcagacc cctgggtgctg ccgttgattt ttttttctct gtctttgctg 1620
 caattttgaa ataaatgcc aaagaacaca 1650

<210> 42
 <211> 2040
 <212> DNA
 <213> Homo sapien

<400> 42
 tccaaattgt ttatttatat atacaaagaa ttatcagggg tttccatgga gtaaatgcc 60
 cggataatcc tctgaaggaa gagcatttag tccaacttaa tgaaaccgat atccttcgcg 120
 tactggacgg aaacactggc ggcacatatg gaggccatat tcccggatca gaccgtgccg 180
 gtttgaacag acacgacaag agcgagaacc cgggccgaat ttacgcgggt ggctccagta 240
 cagctgctgg tgacctatct ttgctctcag ccgcacggat catggccgca gccgctctgg 300
 ggagatctg ggcacgaaag cttctctctg tcccttggct tctgtgtggt ccagaagat 360
 atgcctcctc cagtttcaag gctgcagacc tgcagctgga aatgacacag aagcctcata 420
 agaagcctgg ccccgccgag cccctggtgt ttgggaagac atttaccgac cacatgctga 480
 tgggtggaatg gaatgacaag ggctggggcc agccccgaat ccagcccttc cagaacctca 540

76

cgctgcaccc agcctcctcc agcctccact actccctgca gctgtttgag ggcatgaagg 600
 cgttcaaagg caaagaccag cagggtgcgc tcttcgcgcc ctggctcaac atggaccgga 660
 tgctgcgctc agccatgcgc ctgtgcctgc cgagtttcga caagctggag ttgctggagt 720
 gcatccgccc gctcatcgaa gtggacaagg actgggtccc cgatgccgcc ggcaccagcc 780
 tctatgtgcg gcctgtgctc attgggaacg agccctcgct ggggtgcagc cagcccacgc 840
 gcgcgctcct gttcgtcatt ctctgcccag tgggtgccta cttccctgga ggctccgtga 900
 ccccggtctc cctcctggcc gaccagcct tcacccgggc ctgggtgggc ggggtcggca 960
 actacaagtt aggtgggaat tatgggcccc ccgtgttagt gcaacaggag gcactcaagc 1020
 ggggctgtga acaggtcctc tggctgtatg gggccgacca ccagctcacc gaggtgggaa 1080
 ccatgaacat ctttgtctac tggacccacg aagatggggc gctggagctg gtgacgcccc 1140
 cgctgaatgg tgttatcctg cctggagtgg tcagacagag tctactggac atggctcaga 1200
 cctgggtgag gacatggcat cttctggtga tgggcgccat gtgccaggcg ccagggcatac 1260
 agagggtgg gactggggca cactggcatg tctctgcccc ttctcctggg tctgtctctc 1320
 ccgttgggcc tctgtcttct tcaactatcct caggagggga gaggtggagg tctgcagcag 1380
 ggcaaccctc tggggacacg tgtctctgcc aactgcctg cagggtgagt tccgggtggc 1440
 ggagcgcacg atcaccatga agcagttgct gcgggcccctg gaggagggcc gcgtgcggga 1500
 agtctttggc tcgggcaccg cttgccaggc ctgccagtg caccgaatcc tgtacaaaga 1560
 caggaaacct cacattccca ccatggaaaa tgggcctgag ctgatcctcc gcttcagaa 1620
 ggagctgaag gagatccagt acggaatcag agcccacgag tggatgttcc cgggtgtgaag 1680
 ctgcaggctg tgctccagat ccaccgacct gtagcatctc gtcacgccag cactcgcctc 1740
 cctaccaatg actcacctga agtgcaatac gaaataaaaag gccagcgggc ggcgtctggg 1800
 tctctggcgc ccccatgtgg ttgcgacact cccaaagccg taagggccga ccagggcatc 1860
 ttggcccccga gcccctcgtc gcgggttcag gtccgcccat tactccttgt cgtgcgggtca 1920
 aggatacacc ttggccccga ttccggatct ctccgttctc aggcagacc cctgggtgctg 1980
 ccgttgatct tttttctctc gtctttgctg caattttgaa ataaaatgcc aaagaacaca 2040

<210> 43
 <211> 1191
 <212> DNA
 <213> Homo sapien

<400> 43
 tactcgtgtg ttacagtgtg ccccagatg ttctcccaat tgcgtggcgt tcaactgcagc 60
 tgtaacggtc cctgcgtgca tttatgcgct ctttggacct tgtgaacaca ccgggatact 120

77

ggtaatcttg ccccttatgg agtacttatg gcgctcccct gtgtttatth wtttkggtat 180
 aaacccttwa taascawttt aacwyacaka awagttcawa gawwaagatc agaaagaata 240
 ctgcttcata tgtcccaaaa gagaaaaaaa taaaggggac aatgccaca tgctcaacaa 300
 taaaggcttc tttttcttat ttttttaata caaaatacaa gcaaaggata cacatactta 360
 aaacagagct caggagcaga cacgcagtcc tggaaaccct tcaataaaag caaagcagga 420
 gtttggtttt tctttgtcta tgcagatata tacagagact gggatatgta aaaattaagt 480
 atcacaaaag accatcacac gattctacca atgcatgttg catctgtaat tcacgaacat 540
 ggtcaacaaa atcatgttca cttcaacccc atttcattta aattaaagaa aaaaaccttt 600
 taaataaagt ggttacattc aaactttaac ttcttagta ccatgctgca gatttcagca 660
 ctgttaaggt attgcaagaa tgcccaaccc tctgggtgtct gatcatgtat ctagcaacat 720
 tgcagtatga agaaaagaga tgccccggtc tcagcccatg gactagttaa tacagtgaag 780
 caggttcctg tcttttacc ttctgtctca gaacataaaa gattaaggac taaaatcaag 840
 gaagactggg agtttttagag ctggcaaaat gaagtctaaa agataaatca aggcaacaa 900
 ttactgagaa cttgggtgtt gcttaacctg gcaagtctaa aagcctttct ttaaccttgt 960
 aggaattaga tgcataaggt ttgctgcaac atgttcattg taaacaaact aagtagagct 1020
 cttatttaca aatcttgtta caaatacttc tggaggaaaa agagaaaaga attcactaag 1080
 ttccagaaga caagcttaat tgcagacgta tacaaacaca catcacacgt aacaccacac 1140
 atattcgggt ttttatacat gtatttttag ggcataagct gagtactata c 1191

<210> 44
 <211> 3097
 <212> DNA
 <213> Homo sapien

<400> 44
 gagcctacgt gacacgacgt gaagtggcaa tggcggcgga cgagggtgt gcccccgcc 60
 cgccccgtta ggagcgcga gtaaggcgag tgtccaacgc cgagctggct gacagagccc 120
 ggccgcgcc tccgcgcc caggggcctc caggccccgt gaccacgga ccgagcacc 180
 tggaacggcc ccagcttggc ctgggacag tccgcgcgt caccgactcc ctggtgaacg 240
 ccgcttggcc gccgcgcgc ccgcaggacc cagagaagc ggaaaccggc gcaaggaccc 300
 ggtcccccg gcgcgtacg tggagtgaac ctgcccgtcc gcccgcgcg ctccgattgg 360
 ctctggggcc tggccgccc cttccgcaca ctgtcattgg cctaggcaaa gccgtaaggg 420
 tggggaatcc tattggcca ggggtgcggc ttgtcctctc ccggtgctct cattggccga 480
 gcgcgccgt tgggggtgag gccgcgtcgg gggaggacaa caaaggccg cggcgccg 540

78

gcagtgggtgt cccagtctcc cggcgcttcc ctgaggctga ggcgcccggc ctcccgcctg	600
ccgcgctcca gatgaagtgt gagcactgca cgcgcaagga atgtagtaag aaaacaaaaa	660
ctgatgacca agagaatgtg tcagccgatg caccgagtcc agcccaggaa aatggagaga	720
agggagaatt ccacaagttg gctgatgcca agatattttt gagcgactgc ctggcatgtg	780
acagctgtat gactgcagag gaaggagtcc aactttccca gcaaaatgcc aaggacttct	840
tccgcgttct gaaccttaac aagaaatgtg atacctcaaa gcacaaagtg ctggtagtgt	900
ctgtgtgtcc tcaatctttg ccttattttg ctgctaaatt caacctcagt gtaactgatg	960
catccagaag actctgtggt ttccctcaaaa gtcttggsgt gcactatgta tttgatacga	1020
cgatagctgc ggattttagt atcctggaga gtcaaaaaga attcgtgctg cgctatcgcc	1080
agcacagtga ggaggaacgc accctgcccc tgctgacctc tgctgtcct ggctgggtcc	1140
gatacgccga gcgggtgctg ggtcgcccc tcaactgcccc cctctgcacc gccaagtccc	1200
cccagcaggt catgggctct ttggtgaagg attatttcgc cagacagcag aacctgtctc	1260
cagagaagat tttccacgtc attgtggccc cttgttatga caagaagctg gaggtctctc	1320
aggaaagcct tccccctgct ttgcatggct cccggggcgc tgactgcgtg ttaacatcag	1380
gtgaaattgc tcaaataatg gagcaaggtg acctctcagt gagagatgct gccgtcgaca	1440
ctcttgtaag tggctctctc ggggagagtc ctctgggggg caggacctct cgtcagccct	1500
gccagccacc tgccaggccc agggctgccc tgctttatga cgaggccatg tgaagcactg	1560
cgatgcagtc cccagggccc ctgccacaac cctcagccac cctatagctg ttgaatggga	1620
taccattcac cagggtctgc agggagtga aggtttggcg ggcctccatg gtgtgattgc	1680
caccctaaac ccttgaggaa ggacaaaatg cacaaacagc tttgtcctcg ctggcgacag	1740
gctgttcattg tgtgcaccag ccccttctt cctgagtgc gtctgtgcct cacattccgt	1800
gtggtctatg gggcagtggg gcagctccct caggccctt tgcaccaaga gtggcagctc	1860
gggttctgct gggggcgggtg acctcgatac ccagcaaggc ccagggtccc tgctgcaccc	1920
caggcactgg gcagagagca ccacaaaggc agcagcgtgt gtcctcgcca acagtccgca	1980
tcccaggtgc tgcattcgtg cccttttggg ggaaggtaag atagaagttt acagaattta	2040
agcatctgtg gggccaggcg tgggtggctca cacctataat cacagtactt tgggaggctg	2100
aggtaggagg atcacttgag tccaggaggc tggggctgta gtgagctatg attgtgccac	2160
tgcactccag cctgagagac agaacaagac cctgtctcca aaagaaaaag accataagca	2220
tctggagcac ctgcaagagc ctgtgcatgg gctcggcgtg actgagagtc ctccgccttg	2280
cccagcatc aggcaggccc tcccagacc cctcaagatg ctagaatggg actttctgca	2340
aagtttaaac atctgtacag gatttagctt ctttgggtggc gaacttggat tgtgatgcc	2400

tcaggaagtc	tggtttcact	ctttctgtca	ctgtacgtca	gcattcatga	aggacttgta	2460
ttttctctgc	cttgtgaggt	ttggagactt	gaaggaggac	aaagtgacgc	gtcatgatgg	2520
agccagctca	gacgggcacc	tggcacacat	cttcagacat	gcggccaagg	agctgttcaa	2580
cgaggatgtg	gaggagaaac	aaagacttcc	aagaggtcac	ccttgagaag	aacggagagg	2640
tgggtgttacg	ctttgctgca	gcctatggct	ttcgaaacat	ccagaacatg	atcctgaagc	2700
ttaagaaggg	caagttccca	ttccactttg	tggaggtcct	cgctctgtgt	ggaggatgct	2760
taaatggcag	aggccaagcc	cagactccag	acggacatgc	ggataaggcc	ctgctgcggc	2820
agatggaagg	catttacgct	gacatccctg	tgcggcgtcc	ggagtccagt	gcacacgtgc	2880
aggagctgta	ccaggagtgg	ctggaggggga	tcaactcccc	caaggcccg	gaggtgctgc	2940
ataccacgta	ccagagccag	gagcgtggca	cacacagcct	ggacatcaag	tgggtgaagtc	3000
aggccagggc	cttccagctg	ctcttggggc	cagagccaag	agcctctcag	tagagggagg	3060
ggctgccctg	agtggagtat	taaagacact	taagaaa			3097

<210> 45

<211> 3709

<212> DNA

<213> Homo sapien

<400> 45

gagcctacgt	gacacgacgt	gaagtggcaa	tggcggcgga	cgagggtgt	gccccggcc	60
cgccccgtta	ggagccgcga	gtaaggcgag	tgtccaacgc	cgagctggct	gacagagccc	120
ggccgcggcc	tccgcgggcc	caggggcctc	caggccccgt	gaccaccgga	ccgagcacc	180
tggaaaggcc	ccagcttggc	ctcgggacag	tccgcgcgt	caccgactcc	ctgggtgaacg	240
ccgcttggcc	gcccgcggcc	ccgcaggacc	cacgagaagc	ggaaaccggc	gcaaggaccc	300
ggcccccccg	gcgcgttacg	tggagtgagc	ctgcggctcc	gccccgcgcg	ctccgattgg	360
ctctggggcc	tggcccgccc	cttcccgaca	ctgtcattgg	cctaggcaaa	gccgtaagg	420
tggggaatcc	tattggccca	ggggtgcggc	ttgtcctctc	ccggtgctct	cattggccga	480
gcgcggccgt	tgggggtgag	gccgcgtcgg	gggaggacaa	caaagggccg	cgggcggcgg	540
gcagtgggtg	cccagtctcc	cggtgcttcc	ctgaggctga	ggcgccccgg	ctcccggccg	600
ccgcgctcca	gatgaagtgt	gagcactgca	cgcgcaagga	atgtagtaag	aaaacaaaa	660
ctgatgacca	agagaatgtg	tcagccgatg	caccgagtcc	agcccaggaa	aatggagaga	720
agggagaatt	ccacaagttg	gctgatgcc	agatattttt	gagcgactgc	ctggcatgtg	780
acagctgtat	gactgcagag	gaaggagtcc	aactttccca	gcaaaatgcc	aaggacttct	840
tccgcgttct	gaaccttaac	aagaaatgtg	atacctcaaa	gcacaaagtg	ctggtagtgt	900

ctgtgtgtcc tcaatctttg ccttattttg ctgctaaaatt caacctcagt gtaactgatg	960
catccagaag actctgtggg ttcttcaaaa gtcttggggg gcactatgta tttgatacga	1020
cgatagctgc ggatttttagt atcctggaga gtcaaaaaga attcgtgcgt cgctatcgcc	1080
agcacagtga ggaggaacgc accctgcccc tgctgacctc tgctgtcct ggctgggtcc	1140
gatacgccga ggggtgctg ggtcgcccc tcaactgcccc cctctgcacc gccaaagccc	1200
cccagcaggt catgggtctt ttgggtgaagg attatttcgc cagacagcag gtaagctgac	1260
ctctctggag ggcaggaagg gcaggtgagg gaggaccatg gcacaggggc ccaggaaggg	1320
gaggttcccc atctgtccag cgtgggtcacg gccccccagg tgagcaaaaa ggaagctgtg	1380
gcttcaggaa acatcagcag tgctgtttct caccaacgcc cgtctctatt cctcccttcc	1440
tcttacaacc tttttctttc ttcttaacct tttctgtggc atctgggtggg ttctctgggc	1500
ccattcgggg tagagtagaa atgctgcccc cctgtctgag aatgaggccc cggaccttgc	1560
ccagagatgc tgctgtcctg ctgttgggat gcctcaccca aggaggccta aagtggcctg	1620
tgcttgagg ctgagggcag ctgtcattta gggagccaaa cctggcctct gccctggcct	1680
ttccctcaga ccacgggcat cacatgactt ccttagccac ttctgtgaga ttccacagtg	1740
gccatgatgc tgtcctcctc ttgatggagt ggtcccgcc ctgaggctcc tgcgtgcccc	1800
ctgcctcggc ccgtcgtgtt ctcccttccc acaaccctct gcggccccca ggtcctccca	1860
gaactccctg atgtctccaa ggccaccctc aaagggaccc taatcccatg gtttattctc	1920
cagccgctgg catgccccac actgctcttc tcaatcagac ttacacctc cctccgggga	1980
agcagccatg tccaggcact gtggtaactg gagtagaggg taacatcagg atctttcaga	2040
catttgaagt cagcctaaaa aggcacgcac atttggcagc cttgttattt tagcaatagg	2100
cagtgttttc cttctatcta gtttctttct acccataaaag tcataatttg gcaaattata	2160
aacatgatgt cagagtatac acgttcagtt taggcaggac cgaaaaatga gctatgggac	2220
tttctgtccc ttgccctgcc cccacctgaa gagagccatg tgtttctagg tcttccacgt	2280
gctgccctct cccctggatg gagcccagag ctatgtgtcc tctgtaggg gccatgaggg	2340
gcagccgcag agaaccggcc tccagcagcc tctcacctga ccacctggca cagctgcaac	2400
cagggggcggg tttcctcttt tgctccggcc ctgccctgag tgggtccttt ccaccagac	2460
ctcaccacag ggtcacttgg caactgctgg ctctggcctt tgccaccagt tcaggcccag	2520
ccacaggcac ctgctctgtg tggaccaggg agaggggtag cttgggtggg catcgcttgg	2580
gaagattcag gaaagtctgt ggggtgaagta gccagcgcc acacacacac acacacacac	2640
acactcactc aggcctcctg caatggctcc atgctggacc agcaacagct ccacgccggc	2700

81

tggacttccct cttacttggt ttgtcccat gtgcacaggt tcaggaggaa atgggctcag 2760
 ccttcccggg tcttcagga ggctccactg gctggggggc tttgcagatg tttgggagga 2820
 ccacaccag tcctgaggga ggcagcagac agacatggat ggagtgcagg tgctcgaacc 2880
 tgtctccaga gaagattttc cacgtcattg tggcccttg ttatgacaag aagctggagg 2940
 ctcttcagga aagccttccc cctgctttgc atggctcccg gggcgctgac tgcgtgttaa 3000
 catcaggtga aattgctcaa ataatggagc aagggtgacct ctcaagtga gatgctgccg 3060
 tcgacactct gtttgagagc ttgaaggagg acaaagtgc gcgtcatgat ggagccagct 3120
 cagacgggca cctggcacac atcttcagac atgcggccaa ggagctgttc aacgaggatg 3180
 tggaggagggt cacttaccga gccctgagaa acaaagactt ccaagaggtc acccttgaga 3240
 agaacggaga ggtgggtgta cgctttgctg cagcctatgg ctttcgaaac atccagaaca 3300
 tgatcctgaa gcttaagaag ggcaagttcc cattccactt tgtggaggtc ctgcctgtg 3360
 ctggaggatg cttaaattggc agaggccaag ccagactcc agacggacat gcggataagg 3420
 ccctgctgag gcagatggaa ggcatctacg ctgacatccc tgtgcggcgt ccggagtcca 3480
 gtgcacacgt gcaggagctg taccaggagt ggctggaggg gatcaactcc cccaaggccc 3540
 gagaggtgct gcataccacg taccagagcc aggagcgtgg cacacacagc ctggacatca 3600
 agtggatgaag tcaggccagg gccttcagc tgctcttggg gccagagcca agagcctctc 3660
 agtagaggga ggggctgccc tgagtggagt attaaagaca cttaagaaa 3709

<210> 46
 <211> 1840
 <212> DNA
 <213> Homo sapien

<400> 46
 cgcattctcc tctctgctaa gctttctcat gctagagaat gatgactaaa aaacagatga 60
 tcccatcttc ttattcacca tcccctaaaa aaaacagact gccacgtgga atgtgtcagc 120
 ctcacctggg ggagacaccc ttatctgacg acttaaaagg aaaaacttgg tgagccagcc 180
 tccacacaaa cacacgcata gccttgaca aaacaaaaat ttattgggag aaagatggct 240
 gatgggaggc aagatctgga ttcaggaatc ctcaatttta gctctcgctc tgtcaccaaa 300
 accctccgtc cctcccagag cctcaggag tttccccttg tgtaaaccgg tatcgctcc 360
 cttccagctc tgacatcctg cggttctaga ataccattg attgaaagag ctgtggccaa 420
 acaggaagga cagagtaaga gccgctgaca aaggattctg ccaagacaga atcccaaggt 480
 cacaggagag aggcttgggg cagtgaagc cctctcgggt cttggctttg gaagtgtgga 540
 ctgtaccagc agatgggccc ttgggaagcc aacagggaac aattcaaggc tggagagaaa 600

82

aggccacctt tgacccagca gaaggcagag gcgggagagg agggtgagga tgtacaagga 660
 gcacgcagag cgaggaaaca atggccagga cctaactgtg gtgggaactg cctttgtctc 720
 cacacactcg caatcaacat gcgtatttgc tattctcaaa caactccctt ccacccctt 780
 aggctgaaag gacaaactca tcagagtga ggagtaccta cctgatgaag ctgttcacgc 840
 ttccagcatc aaactggacg tttactgtct gcccaaaagc cagtttccaa aaggtttgct 900
 tcctctgtt cagtggattc ttgactacat ataggtcata tatttcaaaa aataatgcct 960
 agctatttct actttgaaat catgactaaa gccaaaccac aaccacagca aagataacct 1020
 aaggatttgt ttaccagaaa tacctacaaa aaagtttgca ggccgggagc gatggctcac 1080
 acttgtaatc ccagcacttt gagaggccga gatgggcaga tcacctgagg tcaggggttc 1140
 aagaccatcc tgcccaacat gatgaaacct ggtctctact aaaaatacaa aaattaaccg 1200
 ggtgtggtgg cgcatgcctg taatcccagc tactcaggag actgaggcgg aattgccaga 1260
 accctggagg gcagaggttg cagtaagctg agatcgggcc actgcactcc agcctgggtg 1320
 acagaatgag actcagtctc ccacctgcc aaaaagtttg caatgtcggc agcaaagtgc 1380
 aaacagagcc ggctctgggt gaaagcttta gttatgaaaa ataagaaaa aaaaatccct 1440
 aagcatttct taacactagt tttaaagaaa acccctctc caaaggatg tttctccttc 1500
 aactttcttg actttgccag gctgtcagga tgcaagctac ctactctttt ctggaaggat 1560
 cgggacaaag tttttaaaca aagactgtgt cctctccaca agcccttccc accaccacca 1620
 cccagcccc ccgcccctat aattacaggg gctgtgaaat ggctgttgag tgatggctcac 1680
 acaaccagaa ggcagatgaa aaggtcaggc tctaagaggg gttcagcctc ccagtaccag 1740
 cctgctgtgc ccaggggtgg gagtgctggg agaactgtct tcccagaca ggcagctatg 1800
 ccgctccca ctgcaaaggc accaaaggca acatccgtcc 1840

<210> 47

<211> 1618

<212> DNA

<213> Homo sapien

<400> 47

cgtcgacggg atggagggtt ttggtgacag agcgagagct aaaattgagg attcctgaat 60
 ccagatcttg cctcccatca gccatctttc tcccagagcc tcgaggagt tccccttgtg 120
 taaaccggta tcgcgtccct tccagctctg acatcctgag gttctagaat acccattgat 180
 tgaaagagct gtggccaaac aggaaggaca gagtaagagc cgctgacaaa ggattctgcc 240
 aagacagaat cccaaggta caggagagag gcttggggca gtgaaagccc tctcgggtct 300
 tggctttgga agtgtggact gtaccagcag atgggcccctt gggaagccaa cagggaacaa 360

83

ttcaaggctg gagagaaaag gccacctttg acccagcaga aggcagagggc gggagaggag 420
 ggtgaggatg tacaaggagc atcgaggcg aggaacaat gccaggacc taactgtggt 480
 gggaaactgcc tttgtctcca cacactcgca atcaacatgc gtatttgcta ttctcaaca 540
 actcccttcc acccccttag gctgaaagga caaactcatc agagttgagg agtacctacc 600
 tgatgaagct gttcatgctt ccagcatcaa actggacggt tactgtctgc caaaaagcca 660
 gtttccaaaa ggtttgcttc cctctgttca gtggattctt gactacatat aggtcatata 720
 tttcaaaaaa taatgcctag ctatttctac tttgaaatca tgactaaagc caaaccacaa 780
 ccacagcaaa gataacctaa ggatttggtt accagaaata cctacaaaaa agtttgcagg 840
 ccgggcgcga tggctcacac ttgtaatccc agcactttga gaggccgaga tgggcagatc 900
 acctgaggtc aggggttcaa gaccatcctg cccaacatga tgaaacctgg tctctactaa 960
 aaatacaaaa attaacggg tgtggtggcg catgcctgta atcccagcta ctcaggagac 1020
 tgaggcggaa ttgccagaac cctggagggc agagggtgca gtaagctgag atcgggccac 1080
 tgcactccag cctgggtgac agaattgagac tcagtctccc accctgcca aaagtgtgca 1140
 atgtcggcag caaagtgcaa acagagccgg ctctgggtga aagcttagt tatgaaaaat 1200
 aagaaaaaaa aaatccctaa gcatttctta acactagttt taaagaaaac cccctctcca 1260
 aaggtatgtt tctccttcaa ctttcttgac tttgccaggc tgtcaggatg caagctacct 1320
 actcttttct ggatggatcg ggacaaagt tttaaacaaa gactgtgtcc tctccacaag 1380
 ccttccccc caccaccacc ccagccccc gccgccataa ttacaggggc tgtgaaatgg 1440
 ctgttgagtg atggtcacac aaccagaagg cagatgaaaa ggtcagggtc taagaggggt 1500
 tcagcctccc agtaccagcc tgctgtgccc aggggtggga gtgctgggag aactgtcttc 1560
 cccagacagg cagctatgcc gcctcccact gcaaaggcac caaaggcaac atccgtcc 1618

<210> 48
 <211> 3252
 <212> DNA
 <213> Homo sapien

<400> 48
 agggggctct gggcagacgt aggcgccggg ctgcaccttc cctgcccgcc tgtttgcaact 60
 tctctgtgac tgttggtctc aggtccttag ccagcggagg gctgactccg gcctggctgc 120
 cccctcccct ttgcctcccg tccctcccc tggacactcc aacccccatc ccttcgtgtc 180
 cctccccctc ctctctctat gctactccc agccagaccc cccgtctctc cccggaacaa 240
 tggaggggaa tgtggctagg ccagcctgac gctgtgcgt caacctctgg ctggtctctg 300
 gcctctatcg cttccaggga ccttctatc tgggctcagc tgaccgccc cgcctctcgg 360

84

cccacgtgcc ggcagttctc ccaggctggg gctcagctgc gctggagact gggatgggtc 420
agctcagtggt ctctgtctgt ttacaaagga ggaaccagg tgcactaagc agggccccc 480
gtcctgggtg caggcttgtg acagctgctc agggatccaa acgtggcgct tgagctctct 540
gcatgtgtt ccacagttcc ctggaggcgg aactgctg agggtcagcc atgtcatctg 600
agcctcccc accaccacag cccccaccc atcaagcttc agtcgggctg ctggacaccc 660
ctcggagccg tgagcgctca ccatcccctc tgcgcggcaa cgtgggtcca agccactgc 720
ccactcgccg gacgaggacc ttctcggcga cggtcggggc ttacagggc cccgtctaca 780
aaggagcttg caaatgcttc tgccgggtcca agggccatgg cttcattacc ccagctgatg 840
gcgccccga catcttcctg cacatctctg atgtggaagg ggagtatgtc ccagtggaa 900
gcgacgaggc cacctataaa atgtgctcca tcccaccaa gaatgagaag ctgcaggccg 960
tgaggtcgt catcactcac ctggcaccag gcaccaagca tgagacctgg tctggacatg 1020
tcacagctc ctaggagatg gtggaagcac cccttgcct gtgcttggtg gagactttgc 1080
ggggaggagg cagcagacac tggagatgac attcttcac acgagacggg gcttcagccg 1140
ggcatggtcc ctctcaagta tctcctggag gaaggggtat ggggggcagg tgtgggtgt 1200
gggtgttcc cggccatcag cacagcctat gaccattgca acaacctct accatctgaa 1260
gagcattaaa agcatttaaa aaggagaggt gccactggg ggctgagtgg aggttccaa 1320
cccatccag ggagtggatc aagggtggt tttctccagc tgctcagaca catgggtca 1380
accacagaa tccctcttcc tcctggagct ggaggccca gattcccaga tctggcccc 1440
tggcagcctg acagggaacct tgcgtgacct ctccaaggca aatttccacc taagtcccc 1500
ttgcgcctct cctggggcct gggcaaagca gttttctaat tcttggttg gttggttcta 1560
ggggagctgg cttgaagtgg gtgggaaag gcgggggtgg cggcttttg attggacgga 1620
tgttgcttt tgggtgcttt gcagtgggag gcggcatagc tgctgtctg gggaagacag 1680
ttctccagc actcccaccc ctgggcacag caggctggt ctgggaggct gaacctct 1740
tagagcctga ctttttcac tgccttctgg ttgtgtgacc atcactcaac agccatttca 1800
cagccccgt aattatggcg gcggggggct ggggtggtgg tgggtggaag ggcttggtga 1860
gaggacacag tctttgttta aaaactttgt ccgatccat ccagaaaaga gtaggtagct 1920
tgcattctga cagcctggca aagtcaagaa agttgaagga gaaacatacc tttggagagg 1980
gggttttct taaaactagt gttaagaaat gcttagggat ttttttttc ttatttttca 2040
taactaaagc tttcaccag agccggctct gtttgactt tgctgccgac attgcaact 2100
ttttggcagg gtgggagact gagtctcatt ctgtaccca ggctggagtg cagtggccc 2160
atctcagct actgcaacct ctgccctcca ggttctggc aattccgcct cagtctcctg 2220

agtagctggg attacaggca tgcgccacca cccccggta atttttgtat ttttagtaga 2280
 gaccagggttt catcatgttg ggcaggatgg tcttgaaccc ctgacctcag gtgatctgcc 2340
 catctcggcc tctcaaagtg ctgggattac aagtgtgagc catcgcgccc ggcctgcaaa 2400
 cttttttgta ggtattttctg gtaaacaaat ccttaggtta tctttgctgt ggttgtggtt 2460
 tggcttttagt catgatttca aagtagaaat agctaggcat ttttttttga aatatatgac 2520
 ctatatgtag tcaagaatcc actgaacaga gggagcaaaa ccttttgga actggctttt 2580
 gggcagacag taaacgtcca gtttgatgct ggaagcatga acagcttcat caggtaggta 2640
 ctctcaact ctgatgagtt tgtcctttca gcctaagggg gtggaaggga gttgtttgag 2700
 aatagcaaat acgcatgttg attgcgagtg tgtggagaca aaggcagttc ccaccacagt 2760
 taggtcctgg ccagtttgtt tctcgcctg cgatgctcct tgtacgtcct caccctctc 2820
 tcccgctct gccttctgct gggcacaagg tggccttttt ctctccagcc ttgaattgtt 2880
 cctgttggc ttccaaggc cccatctgct ggtacagtcc acacttcaa agccaagacc 2940
 cgagagggct ttactgccc caagcctctc tctgtgacc ttgggattct gtcttggcag 3000
 aatcctttgt cagcggctct tgcctgtcc tctctgttg gccacagctc tttcaatcaa 3060
 tgggtattct agaaccgcag gatgtcagag ctggaaggga cgcgataccg gtttacacaa 3120
 ggggaaactc ctcgaggctc tgggagggac ggagggtttt ggtgacagag cgagagctaa 3180
 aattgaggat tctgaatcc agatcttgcc tcccatcagc catctttctc ccaataaatt 3240
 tttgttttgt gc 3252

<210> 49
 <211> 3014
 <212> DNA
 <213> Homo sapien

<400> 49
 ggtcatgagg gtgccctggc cccaggcca gcagctgggg cctttttgag gtgggggctc 60
 cccggactca ggagttcctc cttggcgcg gctgtagctg agagaaggga caggaggtag 120
 gatgccacct cctccagaag cgtggtgacc cgggctgtgt ggaaattcac tgggcctgat 180
 ggagctggat gcagccttgg aaattctccc ttccctttg ggctcccgca gcaggccccc 240
 cagtccctggg tgcaggcttg tgacagctgc tcagggatcc aaacgtggcg cttgagctct 300
 ctgcgatgtg ttccacagtt ccctggaggc ggacactgcg tgagggtcag ccatgtcatc 360
 tgagcctccc ccaccaccac agccccccac ccatcaagct tcagtcgggc tgctggacac 420
 ccctcggagc cgtgagcgt caccatcccc tctgcgcggc aacgtggtcc caagccact 480
 gccactcgc cggacgagga ccttctcggc gacgggtgcg gcttcacagg gccccgtcta 540

caaaggagtc tgcaaatgct tctgccggtc caagggccat ggcttcatta cccagctga	600
tggcgcccc gacatcttcc tgcacatctc tgatgtggaa ggggagtatg tcccagtsga	660
aggcgacgag gtcacctata aaatgtgctc catcccaccc aagaatgaga agctgcaggc	720
cgtggaggtc gtcactactc acctggcacc aggcaccaag catgagacct ggtctggaca	780
tgtcatcagc tcctaggaga tgggtggaagc accccttgct ctgtgcttgt gggagacttt	840
gcggggagga ggcagcagac actggagatg acattcttcc acacgagacg gggcttcagc	900
cgggcatggc ccctctcaag tatctcctgg aggaaggggt atggggggca ggtgtgggt	960
gtggggtgtt cccggccatc agcacagcct atgaccattg caacaacctc tcaccatctg	1020
aagagcatta aaagcattta aaaaggagag gtgcccactg gtggctgagt ggaggttcca	1080
acccatccc agggagtgga tcaaggggtg tatttctcca gctgctcaga cacatgggc	1140
caaccacag aatccctctt cctcctggag ctggaggccc cagattccca gatctggccc	1200
cctggcagcc tgacagggac ctgctgtgac ttctccaagg caaatttcca cctaagtgcc	1260
ccttgccct ctccctggggc ctgggcaaag cagttttcta attcttggtc tgggtgggtc	1320
taggggagct ggcttgaagt ggggtgggaa aggcgggggt ggcggtcttt ggattggacg	1380
gatgttgctt tttggctgct ttgcagtggg aggcggcata gctgcctgtc tggggaagac	1440
agtctccca gactccac ccctgggcac agcaggctgg tactgggagg ctgaacccct	1500
cttagagcct gaccttttca tctgccttct ggttgctga ccatcactca acagccattt	1560
cacagccct gtaattatgg cggcgggggg ctggggtggt ggcggtggga agggcttgtg	1620
gagaggacac agtctttgtt taaaaacttt gtcccgatcc atccagaaaa gagtaggtag	1680
cttgcactct gacagcctgg caaagtcaag aaagttgaag gagaaacata cttttggaga	1740
gggggttttc tttaaaacta gtgttaagaa atgcttaggg attttttttt tcttattttt	1800
cataactaaa gctttcaccc agagccggct ctgtttgcac tttgctgccg acattgcaaa	1860
ctttttggca ggggtgggag ctgagtctca ttctgtcacc caggctggag tgcagtggcc	1920
cgatctcagc ttactgcaac ctctgccctc cagggttctg gcaattccgc ctgagtctcc	1980
tgagtagctg ggattacagg catgcgccac cacaccgggt taatttttgt atttttagta	2040
gagaccaggc ttcatcatgt tgggcaggat ggtcttgaac ccctgacctc aggtgatctg	2100
cccatctgg cctctcaaag tgctgggatt acaagtgtga gccatcgccg ccggcctgca	2160
aacttttttg taggtatttc tggtaaaca atccttaggt tatctttgct gtggttgtgg	2220
tttggtttta gtcagtattt caaagtagaa atagctaggc attatttttt gaaatatatg	2280
acctatatgt agtcaagaat cactgaaca gaggaagca aaccttttgg aaactggctt	2340

87

```

ttgggcagac agtaaacgtc cagtttgatg ctggaagcat gaacagcttc atcaggtagg 2400
tactcctcaa ctctgatgag ttgttccttt cagcctaagg gggtggaagg gagttgtttg 2460
agaatagcaa atacgcatgt tgattgcgag tgtgtggaga caaaggcagt tcccaccaca 2520
gtaggtcctt ggccagtttg ttccctcgcc tgcgatgctc cttgtacgtc ctcacctcc 2580
tctcccgctt ctgccttctg ctgggtcaaa ggtggccttt ttctctccag ccttgaattg 2640
ttccctgttg gcttcccaag ggcccatctg ctggtacagt ccacacttcc aaagccaaga 2700
cccgaagagg ctttcaactgc cccaagcctc tctcctgtga ccttgggatt ctgtcttggc 2760
agaatccttt gtcagcggct cttgctctgt ccttccctgtt tggccacagc tctttcaatc 2820
aatgggtatt ctagaaccgc aggatgtcag agctggaagg gacgcgatac cggtttacac 2880
aaggggaaac tctctgaggc tctgggaggg acggagggtt ttggtgacag agcgagagct 2940
aaaattgagg attcctgaat ccagatcttg cctcccatca gccatcttcc tcccaataaa 3000
tttttgtttt gtgc 3014

```

```

<210> 50
<211> 2716
<212> DNA
<213> Homo sapien

```

```

<400> 50
gctcaggacc ggtcgggaatt ccggggggcgg acagaacgga ttgcagggtc agccatgtca 60
tctgagcctc ccccaaccacc acagccccc acccatcaag cttcagtcgg gctgctggac 120
acctctcgga gccgtgagcg ctcaccatcc cctctgcgcg gcaacgtggt cccaagccca 180
ctgcccactc gccggacgag gaccttctcg gcgacgggtgc gggcttcaca gggccccgtc 240
tacaaaggag tctgcaaatt ctctctccgg tccaagggcc atggcttcat taccocagct 300
gatggcggcc ccgacatctt cctgcacatc tctgatgtgg aaggggagta tgtccagtg 360
gaaggcgacg aggtcaccta taaaatgtgc tccatccac ccaagaatga gaagctgcag 420
gccgtggagg tcgtcatcac tcacctggca ccaggcacca agcatgagac ctggtctgga 480
catgtcatca gctcctagga gatggtggaa gcaccccttg tctgtgctt gtgggagact 540
ttgcggggag gaggcagcag acactggaga tgacattctt ccacacgaga cggggcttca 600
gccgggcatg gtccctctca agtatctctt ggaggaaggg gtatgggggg cagggtgtgg 660
gtgtgggggtg ttcccgcca tcagcacagc ctatgacat tgcaacaacc tctcaccatc 720
tgaagagcat taaaagcatt taaaaggag aggtgcccac tggtgsgctga gtggagggtc 780
caaccccatc ccaggagtg gatcaagggt ggtatttctc cagctgctca gacacatggg 840
ctcaaccac agaatccctc ttctcctcg agctggaggc ccagattcc cagatctggc 900

```

```

ccccggcag cctgacaggg accttgctg acttctccaa ggcaaatttc cacctaagtg 960
ccccctgctc ctctcctggg gcctgggcaa agcagttttc taattcttgg cttgggttgg 1020
tctaggggag ctggcttgaa gtgggtgggg aaaggcgggg gtggcggtct ttggattgga 1080
cggatgttgc cttttggtgc ctttgcagtg ggaggcggca tagctgcctg tctggggaag 1140
acagttctcc cagcactccc acccctgggc acagcaggct ggtactggga ggctgaaccc 1200
ctcttagagc ctgacctttt catctgcctt ctggttgtgt gaccatcact caacagccat 1260
ttcacagccc ctgtaattat ggcggcgggg ggcctgggtg gtggtggtgg gaagggttgg 1320
tggagaggac acagtctttg tttaaaaact ttgtcccgat ccatccagaa aagagtaggt 1380
agcttgcatc ctgacagcct ggcaaagtca agaaagtga aggagaaaca tacctttgga 1440
gaggggggtt tctttaaaac tagtggttaag aaatgcctag ggattttttt tttcttattt 1500
ttcataacta aagctttcac ccagagccgg ctctgtttgc actttgctgc cgacattgca 1560
aactttttgg caggggtggg gactgagctt cattctgtca cccaggctgg agtgcaagtg 1620
cccgatctca gcttactgca acctctgccc tccagggttc tggcaattcc gcctcagtct 1680
cctgagtagc tgggattaca ggcatgcgcc accacacccg gtaattttt gtatttttag 1740
tagagaccag gtttcatcat gttgggcagg atggtcttga acccctgacc tcaggtagtc 1800
tgcccatctc ggctctcaa agtgctggga ttacaagtgt gagccatcgc gcccgycctg 1860
caaacttttt tgtaggtatt tctggtaaac aaatccttag gttatctttg ctgtggtgtt 1920
ggtttggtct tagtcatgat ttcaaagtag aaatagctag gcattatttt ttgaaatata 1980
tgacctatat gtagtcaaga atccactgaa cagagggaag caaacctttt ggaaactggc 2040
ttttgggcag acagtaaacg tccagtttga tgctggaagc atgaacagct tcacaggta 2100
ggtactcctc aactctgatg agtttgcctt ttcagcctaa ggggggtggaa gggagtgtgt 2160
tgagaatagc aaatacgcat gttgattgag agtggtgga gacaaaggca gttcccacca 2220
cagttaggtc ctggccagtt tgtttcctcg cctgcgatgc tcctgtacg tcctcaccct 2280
cctctccgcg ctctgccttc tgctgggtca aagggtggct ttttctctcc agccttgaat 2340
tgttcctgtt tggttccca agggcccatc tgctggtaca gtccacactt ccaaagccaa 2400
gacccgagag ggctttcact gcccgaagcc tctctcctgt gacctggga ttctgcttgg 2460
gcagaatcct ttgtcagcgg ctcttgcctt gtccttcctg tttggccaca gctctttcaa 2520
tcaatgggta ttctagaacc gcaggatgtc agagctggaa gggacgcgat accggtttac 2580
acaaggggaa actcctcgag gctctgggag ggacggaggg ttttggtgac agagcgagag 2640
ctaaaattga ggattcctga atccagatct tgcctcccat cagccatctt tctccaata 2700
aatttttgtt ttgtgc 2716

```

<210> 51
 <211> 3539
 <212> DNA
 <213> Homo sapien

<400> 51
 caatgagaag acttactttc ctggtaggca gcctgctttg ttttgcacag gaagatagat 60
 tttttttctc atctttctta taaacaacct catgcacatt ctgtgtttga gccaaagacta 120
 gtcgaattcg aattcgaatt cgaagcggct ggccgacaga acggattgca gggtcagcca 180
 tgtcatctga gcctccccc ccaccacagc cccccaccca tcaagcttca gtccgggtgc 240
 tggacacccc tcggagccgt gagcgctcac catccctct gcgcggcaac gtgggtcccaa 300
 gccactgcc cactcgcccg acgaggacct tctcggcggt agtctggagc aggctgggga 360
 cgcgttctca gatggatctc ttgcctgagg ccagagattc actgtgtctc tggccatttt 420
 tgggcctatg tcccggactg ccaaataagg agacctgggg ctgggcccgt ggctgagggt 480
 gagaaactag gaaggcgcct tgtaaattca gggactgcc cagcccagaa gaacctgtta 540
 ccagctggga gtggcaatgg gtgggcagtt gctggggtca gaatcgctgg gctttaacca 600
 cacatgagag tctggttccc tctgagactg tgaattctgc agctgcaaaa tgggcacagc 660
 accagggtcg caaaggacct acataatgcc tggcagatgc aggtctcagg ccttgcgagt 720
 ggaggatgct tgtgttatta atagttaaac attagtctct ggagggtgt tcaagtgtgt 780
 tttagttaaa ctccctcttt ccaggaggga aaacaggccc gagaaaattg gccagggtca 840
 cccaaagagt cctttccccc agcgtctttg tgagcggctc ccagggttga ggggtgtgca 900
 gtctcagcc tgtgtgactg tacatggcgg tcttggccag ggcttgatcg ggcacagctg 960
 tgggcagggg ctggaatgag ctttgtgtgc ccaggagcgc tgatggggcc cctgacattt 1020
 cccctctct gtcaggacgg tgcgggcttc acaggggccc gtctacaaag gagtctgcaa 1080
 atgcttctgc cggccaagg gccatggctt cattaccca gctgatggcg gcccgcacat 1140
 ctctctgcac atctctgatg tggaagggga gtatgtcca gtggaaggcg acgaggtcac 1200
 ctataaaatg tgctccatcc caccaagaa tgagaagctg caggccgtcg aggtcgcat 1260
 cactcacctg gcaccaggca ccaagcatga gacctggtct ggacatgtca tcagctctta 1320
 ggagatggtg gaagcacccc ttgtctgtg cttgtgggag actttgcggg gaggaggcag 1380
 cagacactgg agatgacatt cttccacacg agacggggct tcagccgggc atggtccctc 1440
 tcaagtatct cctggaggaa ggggtatggg gggcagggtg ggggtgtggg gtgttcccg 1500
 ccatcagcac agcctatgac cattgcaaca acctctcacc atctgaagag cattaagaag 1560
 atttaaaaag gagaggtgcc cactggtggc tgagtggagg ttccaacccc atcccaggga 1620

gtggatcaag ggtggtatct ctccagctgc tcagacacat gggctcaacc cacagaatcc 1680
 ctcttctctcc tggagctgga ggccccagat tcccagatct ggccccctgg cagcctgaca 1740
 gggaccttgc gtgacttctc caaggcaaatt tccacctaag gtgccccctg cgcctctcct 1800
 ggggctggg caaagcagtt ttctaattct tggcttggtt ggttctaggg gagctggcct 1860
 gaagtgggtg gggaaaggcg ggggtggcgg tctttggatt ggacggatgt tgccttttgg 1920
 tgccttttga gtgggaggcg gcatagctgc ctgtctgggg aagacagttc tcccagcact 1980
 cccacccctg ggcacagcag gctgggtactg ggaggctgaa cccctcttag agcctgacct 2040
 tttcatctgc cttctgggtt tgtgaccatc actcaacagc catttcacag cccctgtaat 2100
 tatggcggcg gggggctggg gtggtggttg tgggaaggcg ttgtggagag gacacagtct 2160
 ttgtttaaaa actttgtccc gatccatcca gaaaagagta ggtagcttgc atcctgacag 2220
 cctggcaaaag tcaagaaagt tgaaggagaa acataccttt ggagaggggg ttttctttta 2280
 aactagtgtt aagaaatgct tagggatctt tttttcttta tttttcataa cttaaagcttt 2340
 caccagagc cggtctgtt tgcactttgc tgcgacatt gcaaactttt tggcagggtg 2400
 ggagactgag tctcattctg tcacccaggc tggagtgcag tggccgatc tcagcttact 2460
 gcaacctctg cctccaggg ttctggcaat tccgcctcag tctcctgagt agctgggatt 2520
 acaggcatgc gccaccacac ccggttaatt ttgtatctt tagtagagac caggtttcat 2580
 catgttgggc aggatggctt tgaacccctg acctcagggt atctgccat ctcggcctct 2640
 caaagtgtg ggattacaag tgtgagccat cgcgcccgcc ctgcaaactt ttttgtagg 2700
 atttctggta acaaaatcct taggttatct ctgctgtggt tgtggtttgg ctctagtcac 2760
 gatttcaaag tagaaatagc taggcattat tttttgaaat atatgacct tatgtagtca 2820
 agaatccact gaacagaggg aagcaaacct ttggaaaact ggcttttggg cagacagtaa 2880
 acgtccagtt tgatgctgga agcatgaaca gcttcatcag gtaggtactc ctcaactctg 2940
 atgagtttgt cctttcagcc taaggggggt gaaggaggtt gtttgagaat agcaaatacg 3000
 catgttgatt gcgagtgtgt ggagacaaag gcagttccca ccacagttag gtccctggcca 3060
 gtttgtttcc tcgcctgcca tgcctctgt acgtcctcac cctcctctcc cgcctctgcc 3120
 ttctgctggg tcaaagggtg ctttttctc tccagccttg aattgttccc tgttggcttc 3180
 ccaaggggcc atctgctggt acagtccaca ctccaaagc caagaccgga gagggctttc 3240
 actgccccaa gcctctctcc tgtgacctg ggattctgtc ttggcagaat cctttgtcag 3300
 cggctcttgc tctgtccttc ctgtttggcc acagctcttt caatcaatgg gtattctaga 3360
 accgcaggat gtcagagctg gaaggagcgc gataccgggt tacacaaggg gaaactcctc 3420

91

gaggctctgg gagggacgga gggtttttgt gacagagcga gagctaaaat tgaggattcc 3480
 tgaatccaga tcttgccctcc catcagccat ctttctccca ataaattttt gttttgtgc 3539

<210> 52
 <211> 2810
 <212> DNA
 <213> Homo sapien

<400> 52
 caaggaattt tagggcggac gtcggtagt ctttcccgcc tgcccacctg ttctctcggt 60
 gcaggggaag ctcttccgc cctccccgt gcttttgct ttgggcggga gccctggacg 120
 ggggactcgc cgggcggtgg ggcgagggc gggggcgct gcacgcggga agcagagcca 180
 cccccgcgc ggctggccg cgcagctgt ggctcgaggt tgggacgtca gccatgtcat 240
 ctgagcctcc cccaccacca cagccccca cccatcaagc ttcagtcggg ctgctggaca 300
 cccctcggag ccgtgagcgc tcaccatccc cgtctacaaa ggagtctgca aatgcttctg 360
 ccggtccaag ggccatggct tcattacccc agctgatggc ggccccgaca tcttctgca 420
 catctctgat gtggaagggg agtatgtccc agtggaaggc gacgaggtca cctataaaat 480
 gtgctccatc ccaccaaga atgagaagct gcaggccgtg gaggtcgtca tcactcacct 540
 ggcaccaggc accaagcatg agacctggct tggacatgtc atcagctcct aggagatggg 600
 ggaagcacc cttgtcctgt gcttgaggga gactttgcgg ggaggaggca gcagacactg 660
 gagatgacat tcttccacac gagacggggc ttcagccggg catggctcct ctcaagtatc 720
 tcctggagga aggggtatgg ggggcagggt tggggtgtgg ggtgttccc gccatcagca 780
 cagcctatga ccattgcaac aacctctcac catctgaaga gcattaaaag catttaaaaa 840
 ggagaggtgc ccactggtgg ctgagtggag gttccaacc catcccagg agtggtatcaa 900
 ggggtggtat tctccagctg ctccagacaca tgggctcaac ccacagaatc cctcttctc 960
 ctggagctgg aggccccaga tcccagatc tggccccctg gcagcctgac agggaccttg 1020
 cgtgacttct ccaaggcaaa tttccaccta agtgccccct gcgcctctcc tggggcctgg 1080
 gcaaagcagt tttctaattc ttggcttggt tggttctagg ggagctggct tgaagtgggt 1140
 ggggaaaggc gggggtggcg gtctttggat tggacggat ttgccttttg gtgcctttgc 1200
 agtgggaggc ggcatagctg cctgtctggg gaagacagtt ctccagcac tcccaccct 1260
 gggcacagca ggctggtact gggaggctga acccctctta gagcctgacc tttcatctg 1320
 ccttctggtt gtgtgacct cactcaacag ccatttcaca gccctgtaa ttatggcggc 1380
 ggggggctgg ggtggtggtg gtgggaagg cttgtggaga ggacacagtc tttgtttaaa 1440
 aactttgtcc cgatccatcc agaaaagagt aggtagcttg catcctgaca gcctggcaaa 1500

92

gtcaagaaag ttgaaggaga aacatacctt tggagagggg gttttcttta aaactagtgt 1560
 taagaaatgc ttagggattt ttttttctt atttttcata actaaagctt tcacccagag 1620
 ccggctctgt ttgcactttg ctgccgacat tgcaaacctt ttggcagggg gggagactga 1680
 gtctcattct gtcacccagg ctggagtga gtggcccgat ctgagcttac tgcaacctct 1740
 gccctccagg gttctggcaa ttccgcctca gtctcctgag tagctgggat tacaggcatg 1800
 cgccaccaca cccggttaat ttttgtattt ttagtagaga ccaggtttca tcatgttggg 1860
 caggatgggc ttgaacccct gacctcagggt gatctgcca tctcgccctc tcaaagtgc 1920
 gggattacaa gtgtgagcca tcgcgcccgg cctgcaaact tttttgtagg tatttctggc 1980
 aaacaaatcc ttaggttatc tttgctgtgg ttgtggtttg gcttttagtca tgatttcaaa 2040
 gtagaaatag ctaggcatca ttttttgaaa tatatgacct atatgtagtc aagaatccac 2100
 tgaacagagg gaagcaaacc ttttggaac tggcttttgg gcagacagta aacgtccagt 2160
 ttgatgctgg aagcatgaac agcttcatca ggtaggtaact cctcaactct gatgagtttg 2220
 tcctttcagc ctaagggggg ggaagggagt tgtttgagaa tagcaaatac gcatgttgat 2280
 tgcgagtgtg tggagacaaa ggcagttccc accacagtta ggtcctggcc agtttgtttc 2340
 ctgcctgag atgctccttg tacgtcctca cctcctctc ccgcctctgc cttctgctgg 2400
 gtcaaagggt gcctttttct ctccagcctt gaattgttcc ctggttgctt cccaagggcc 2460
 catctgctgg tacagtccac acttccaaag ccaagaccgg agagggcttt cactgcccc 2520
 agcctctctc ctgtgacctt gggattctgt cttggcagaa tcccttgta ggggctcttg 2580
 ctctgtcctt cctgtttggc cacagctctt tcaatcaatg ggtattctag aaccgcagga 2640
 tgtcagagct ggaagggacg cgataccgg ttacacaagg ggaaactcct cgaggctctg 2700
 ggagggacgg agggtttttg tgacagagcg agagctaaaa ttgaggattc ctgaatccag 2760
 atcttgctc ccatcagcca tctttctccc aataaatttt tgttttgcgc 2810

<210> 53

<211> 4725

<212> DNA

<213> Homo sapien

<400> 53

aatttgaaaa ccccatggga cctgagtcaa accgatccag ggctgctgct gtccctcccc 60
 gctgtgtggg gttgagtggc gtcctgagtt aggcctctcc ctacttcata tcataccccc 120
 atcaccagcc ctgctgaggt gccaaagtga gccacccag ctgccccact ttgcagattc 180
 ggaaactgag ccagagatg ggaaaggact tacccaaggg cctctgactg ctggactgtt 240
 tctctttccc ctgaacctcg agctgaggcc acgttagagc cgacacctc atattcaatg 300

ttcagtgatt attgtgtaca gcgagtgtcc tgctcttgaa aaattgtcaa aagcacagca	360
gcagctaggg aattcccgcc ctccagctgg atttaccggc acatactagg ggtcacagaa	420
ggaatttgat ttcataacag cgtgggtgacc cgggctgtgt ggaaattcac tgggcctgat	480
ggagctggat gcagccttgg aaattctccc tttccctttg ggctcccgca gcaggccccc	540
cagtcctggg tgcaggcttg tgacagctgc tcagggatcc aaacgtggcg cttgagctct	600
ctgcgatgtg ttccacagtt ccttgagggc ggacactgcg tgagggtcag tttttgcccc	660
tgettccctg tgggtgtctgg ctcccagcag cgtcaggagc ggtccgtgga gtggctgagt	720
ttggatctag gtggttggca ttaaaatctc cctggctttg ggttttcttt tttgagacag	780
agtcttgctc tgtagcccag gctggagtgc agtgggtgca tctcagctca ctggaacctc	840
cgcctcccag gtccaagcaa ttctcatgcc tcagccttca agtagatggg attacagggtg	900
cctgccacca tgcccagcta atttttgtat tcgtattaga gactgggttt ccccatgttg	960
gccaggctag tctcgaactc ctgacattaa gtgatccgcc tgccctcggc tcccagagtg	1020
ctgggattgc aggtgtgagc cactgcgccc ggccccctggc tttgggtttt ctgctcacct	1080
tcctccttcc ctcccacaaa tactatgtgt cccaaatgtg ccgggatcca tgccttgtgc	1140
tggggacaca gaggggaccg atgccatcct ggtcatgggg gaggatgtgg cattttcatg	1200
aagagctatg atcgaggggg cccacagggt gcttcaggag ccagagtag gcatctgacc	1260
ctgccaggcg tgctcccaga caagggtgaca atgggtgctga ggtgcccag aggaatgagc	1320
ctcagatact ggactgtcag acgtggacat gggggtaagc acagggtccc taccttgcaa	1380
ggcacgagcc cctgacagcc tcttctcttt ccaggtcagc catgtcatct gagcctcccc	1440
caccaccaca gccccccacc catcaagctt cagtcgggct gctggacacc cctcggagcc	1500
gtgagcgctc accatcccct ctgcgcggca acgtgggtccc aagcccactg cccactcgcc	1560
ggacgaggac cttctcggcg tgagtctgga gcaggctggg gacgcgttct cagatggatc	1620
tcttgctga ggccagagat tcaactgtgtc tctggccatt tttggccta tgtcccggac	1680
tgccaaatag gcagacctgg ggctgggccc tgggctgagg gtgagaaact aggaaggcgc	1740
cttgtaaatt cagggtactg cccagcccag aagaacctgt taccagctgg gagtggcaat	1800
gggtgggcag ttgctggggt cagaatcgct gggctttaac cacacatgag agtctggttc	1860
cctgtgagac tgtgaattct gcagctgcaa aatgggcaca gcaccagggc tgcaaaggac	1920
ccacataatg cctggcagat gcaggctctca ggccttgcca gtggaggatg cttgtgttat	1980
taatagtaaa tcattagttt ctggacggat gttcagtgat gttttagttc aactccctct	2040
ttccaggagg gaaaacaggc ccgagaaaat tggccagggt cacccaaaga gtcctttccc	2100
ccagcgtctt tgtgagcggc tcccagggtt gaggggtgtg cagtcctcag cctgtgtgac	2160

tgtacatggc ggtcctggcc agggcttgat ggggcacagc tgtgggcagg ggctggaatg 2220
 agcttttgtgt gccaggagc gctgatgggg cccctgacat ttccccctct ctgtcaggac 2280
 ggtgcgggct tcacagggcc ccgtctacaa agsagtctgc aaatgcttct gccgggtccaa 2340
 gggccatggc ttcatatccc cagctgatgg cgccccgac atcttcctgc acatctctga 2400
 gtgagtcagc ggcaggtctg ggtggcctgg ctgggggtgg cgcttccttg gccctggcac 2460
 caggcaccaa gcatgagacc tgggtctggac atgtcatcag ctccaggag atgggtggaag 2520
 cacccttgt cctgtgcttg tgggagactt tgcggggagg aggcagcaga cactggagat 2580
 gacattcttc cacacgagac ggggcttcag ccgggcatgg tccctctcaa gtatctcctg 2640
 gaggaagggg tatggggggc aggtgtgggg tgtgggggtgt tcccgccat cagcacagcc 2700
 tatgaccatt gcaacaacct ctaccatct gaagagcatt aaaagcattt aaaaaggaga 2760
 ggtgcccact ggtggctgag tggagggtcc aaccccatcc caggagtggt atcaagggtg 2820
 gtatttctcc agctgctcag acacatgggc tcaaccaca gaatccctct tccctcctga 2880
 gctggaggcc ccagattccc agatctggcc cctggcagc ctgacaggga ccttgctga 2940
 ctctccaag gcaaatttcc acctaatgac ccttgctgccc tctcctgggg cctgggcaaa 3000
 gcagttttct aattcttggc ttgggtgggt ctaggggagc tggcttgaag tgggtgggga 3060
 aaggcggggg tggcgtctt tggattggac ggatgttggc ttttgggtgcc tttgcagtgg 3120
 gaggcggcat agctgcctgt ctggggaaga cagttctccc agcactccca cccctgggca 3180
 cagcaggctg gtactgggag gctgaacccc tcttagagcc tgaccttttc atctgccttc 3240
 tggtttgttg accatcactc aacagccatt tcacagcccc tgtaattatg gcggcggggg 3300
 gctgggggtg tgggtggtgg aagggtctgt ggagaggaca cagtctttgt ttaaaaactt 3360
 tgtcccgatc catccagaaa agagtaggta gcttgcatcc tgacagcctg gcaaagtcaa 3420
 gaaagttgaa ggagaaacat acctttggag aggggggttt ctttaaaact agtgttaaga 3480
 aatgcttagg gatttttttt ttcttatttt tcataactaa agctttcacc cagagccggc 3540
 tctgtttgca ctttgctgcc gacattgcaa actttttggc aggggtgggag actgagtcct 3600
 attctgtcac ccaggctgga gtgcagtggc ccgatctcag ctactgcaa cctctgccct 3660
 ccagggttct ggcaattccg cctcagtcct ctgagtagct gggattacag gcatgcgcca 3720
 ccacaccggg ttaatttttg tatttttagt agagaccagg tttcatcatg ttgggcagga 3780
 tggctctgaa cccctgacct caggtagctt gccatctcg gcctctcaa gtgctgggat 3840
 tacaagtgtg agccatcgcg ccggcctgc aaactttttt gtaggtattt ctggtaaaaca 3900
 aatccttagg ttatctttgc tgtgggtgtg gtttggcttt agtcatgatt tcaaagtaga 3960

95

aatagctagg cattatTTTT tgaaatatat gacctatatg tagtcaagaa tccactgaac 4020
 agagggaagc aaacctTTTT gaaactggct tttgggcaga cagtaaactgt ccagtttgat 4080
 gctggaagca tgaacagctt catcaggtag gtactcctca actctgatga gtttgcctt 4140
 tcagccaaag ggggtggaag ggagttgttt gagaatagca aatacgcagc ttgattgcga 4200
 gtgtgtggag acaaaggcag ttcccaccac agtttaggtcc tggccagttt gtttctctgc 4260
 ctgcgatgct ccttgtacgt cctcaccctc ctctcccgcc tctgccttct gctgggtcaa 4320
 aggtggcctt tttctctcca gccttgaatt gttccctgtt ggcttcccaa gggcccatct 4380
 gctggtacag tccacacttc caaagccaag acccgagagg gctttcactg cccaagcct 4440
 ctctctgtg accttgggat tctgtcttgg cagaatcctt tgtcagcggc tcttgctctg 4500
 tcttctctgt ttggccacag ctctttcaat caatgggtat tctagaaccg caggatgtca 4560
 gagctggaag ggacgcgata ccggtttaca caaggggaaa ctctcagagg ctctgggagg 4620
 gacggagggg tttgggtgaca gagcgagagc taaaattgag gattcctgaa tccagatctt 4680
 gcctcccatc agccatcttt ctcccaataa atttttgttt tgtgc 4725

<210> 54
 <211> 1147
 <212> DNA
 <213> Homo sapien

<400> 54
 gaggatcccc atcgaggcsa tgtgaagaca gccagccgac attcttccaa kkggaagatg 60
 tgcatagaaa cagatacaaa caaatcacat atatggctca aggtcttgct gtgagagaga 120
 tgactgggat gactaagttt aaaccttatt tcatttctgc aacttctgag attttgtctc 180
 aaaaatgcat taatacaaat gtgctttttt tgtctctctc agataatcat ggacatatgt 240
 atccctctct gagactcatc tgggatttgg ctctccttgg aagctcttac gtgatgtggg 300
 aatgacaac acaggtgtca cactactact tggcacagct cactagtgtg aggagtgga 360
 aaactaatga tgatacaatt gattttgatt atactgttct acttcatgaa ttatcaacac 420
 aggaaataat tcctgtctgc attcacttgg tctggtaccc tggcaaacct cttaaagtga 480
 agtaccactg tcaagagcta cagacaccag aagaagcctc cggaactgaa gaaggatcag 540
 ctgtagtacc aacagagctt agtaatttct aaaaagaaaa aatgatcttt ttccgacttc 600
 taaacaagtg actatactag cataaatcat tcttctagta aaacagctaa ggtatagaca 660
 ttctaataat ttgggaaaac ctatgattac aagtaaaaac tcagaaatgc aaagatgttg 720
 gttttttgtt tctcagtctg ctttagcttt taactctgga agcgcagcga cactgaactc 780
 tgctcagtgc taaacagtca ccagcagggt cctcagggtt tcagccctaa aatgtaaac 840

96

ctggataatc agtgtatggt gcaccagaat cagcattttt tttttaactg caaaaaatga 900
 tgggtctcatc tctgaattta tattttctcat tcttttgaac atactatagc taatatattt 960
 tatgttgcta aattgcttct atctagcatg ttaaacaaag ataataact ttcgatgaaa 1020
 gtaaattata ggaaaaaat taactgtttt aaaaagaact tgattatgtt ttatgatttc 1080
 aggcaagtat tcatttttaa cttgtacct acttttaa ataatgtttac atttctaaat 1140
 aatgaaa 1147

<210> 55

<211> 1415

<212> DNA

<213> Homo sapien

<400> 55

caactgcctg cctactgaaa aatatccaat gcactgggtt tagaaacagc gtgtatagct 60
 tcatgtggta tatatgaaga atgtgggtgt tggagtcagt agatctgggt tggaaattccc 120
 atttgtccct tcttagctgt aatctcaaat tacctctcct gtaaaaccag gtcataata 180
 cacagattgt aaaggagaat tagatgagaa catgtagaag gtgcctagca cagaaccag 240
 cccatgggtg accttctaga attactgatt gccctcccc ttgtcttatt gcctgtcata 300
 tcagggctaa tatatcagct tgaggtatat atacagtatc tagatcctta aggttgtaa 360
 aagaatctcc ctattccac agacttcggt ctccatcaga aaaagtgaca gacattcaac 420
 cagactttca tataactcag tgacaagaca aaaatgagga tccatgactt ccatatcttg 480
 aagcaaaata ccacaaaaa ccgtgaggct gaaatcgaaa aggcagtagg agacacaagg 540
 caccattca aaacaagaat gtattgtata gttattcac taaataccac catatttatt 600
 aactaactc ttttttctcc ctctagaaa actaatgatg atacaattga ttttgattat 660
 actgttctac ttcatgaatt atcaacacag gaaataattc cctgtcgcat tcacttggtc 720
 tggtagcctg gcaaacctct taaagtgaag taccactgtc aagagctaca gacaccagaa 780
 gaagcctccg gaactgaaga aggatcagct gtagtaccac cagagcttag taatttctaa 840
 aaagaaaaaa tgatcttttt ccgacttcta aacaagtgac tatactagca taaatcattc 900
 ttctagtaaa acagctaagg tatagacatt ctaataattt gggaaaacct atgattacaa 960
 gtaaaaactc agaaatgcaa agatgttgggt tttttgtttc tcagtctgct ttagctttta 1020
 actctggaag cgcattgcaca ctgaactctg ctcatgtcta aacagtcacc agcaggttcc 1080
 tcagggtttc agccctaaaa tgtaaaacct ggataatcag tgtatgttgc accagaatca 1140
 gcattttttt ttttaactgca aaaaatgatg gtctcatctc tgaatttata tttctcattc 1200
 ttttgaacat actatagcta atatatatta tgttgctaaa ttgcttctat ctagcatgtt 1260

97

aaacaaagat aatatacttt cgatgaaagt aaattatagg aaaaaaatta actgttttaa 1320
 aaagaacttg attatgtttt atgatttcag gcaagtatcc atttttaact tgctacctac 1380
 ttttaaataa atgtttacat ttctaaataa tgaaa 1415

<210> 56

<211> 2201

<212> DNA

<213> Homo sapien

<400> 56

caggatcaga tacgcacttc tgcttctct acaggagaga agagaatagt tttgatagag 60
 accaggggaag aagccacctg tgccaaagca tggatgggga ccagacagaa gagagaatga 120
 tgaagatgat ggtgcatcag agacctttgc ccagccagc actacttct atgagctcca 180
 acactttccc ttcaagatct actaagcaa gtcccatgaa cctctccca tcctctcaca 240
 tgcttgagc attctcagaa agtaacagca gttttccaca gagtgcctcc ctgccaccat 300
 acttctctca aggccctagc aacagaccac ctatcagagc cgaaggcaga aacttcccct 360
 tgccacttcc aaacaaacct cggcccccat ccccgcgga ggaagagaat tcattaaatg 420
 aagagtggta cgtttcttat attaccgac cagaggcaga agctgctctt agaaagataa 480
 accaggatgg cacatttctg gtcagagaca gctctaaaaa aacaacaacc aatccatag 540
 tcctcatggt gttgtacaaa gataaagttt acaacatcca gatccgttat cagaaggaaa 600
 gtcaagttaa ctgttgagg actggactcc gagggaaaga ggactttctg tctgtgtcag 660
 atattattga ctacttcagg aaaatgccac ttctgctcat tgatgggaaa aaccgaggtt 720
 ccagatacca gtgcacatta acgcatgctg cagggtaccc atagcaagt atagccgagc 780
 aatgaaccg tcctcctgcc tctgttgcca acacgagatc aatcagcctt ggtcaatgga 840
 caaacactta ggactgaact gaacctctcc ccatgaacac aagggtttta tcctttcctt 900
 taaaaacagt gtttgaaatg aagactgtca actatcccat aatttattta ttcttcttca 960
 atgtttgtaa agtgcagag tcatgttcac acttgaagtc tagtagtgca ctgtaataat 1020
 tcatttttta aaagattatt taatgcccat ttcaaaatac agtagtttac acagctacag 1080
 aaacaatttg gggcaagttt taaaacactg aaacagtaat agttattgggt gtcacataaa 1140
 actgatttgt tttttacagc caaacctctg tcagtcagag gcattcatta gttttataca 1200
 tgtaatttga aaatcactaa acctcgtttt ctacgagca ataatttaag aggcttcaaa 1260
 aatataattt cactcttatt tagtattttt tcctgggggc atttttacgt aattttttta 1320
 tgaaaagaca aatgcatgtt gagataactt ctgggattaa aatagtcttt tgctttactt 1380
 ttttggttcc ctaaaacaac ttatttgact tttagtccat actgttatat ttttgtctta 1440

98

```

aagaaaattt aaactacaaa taccaaaaga aaacatttta aatttaggga tgagactttg 1500
gtgtatcgtg ggtctaggtt taatgaacac atctgggggtt aagttggcat ttcctcacat 1560
ctccacaccc acaccaacca tcacagcccc ccaccaacct tctcccaacc ccaaaagcat 1620
tgtccaggga tatagatttt accaaaggct tcttgggaag acgagggagc aacactttag 1680
attaaatgtg atcagacttt cctattagat atggtctctt tgtctcttgt tatccccctg 1740
acagctctgc cataaagtcc cttctcctca tccttcccaa acaggctgta taagtgcctt 1800
gaggtaatga aactctttcc tccagtttac aaatatcact taacaaaaaa tataggcatt 1860
cagccagatt aaaaaactgg tattcagcca aatagtgaac atcagttgtt cttcaagttt 1920
ttcccttttg gaccttgggt gttattgcac aacttttatt agcaacaatt tttggcgtct 1980
ctgcttaatc tacaagtttt cgaaatggaa aagagtatct tgcagcttca ttttcatgag 2040
ctaataaaag gggtatbga aggaatctaa gaagtcacca ttttaaaact gatgatatgt 2100
taaaataagg agtatgcaga aggtagagac ttttaactga tgataaaaat ggtgtttcac 2160
aaaatctcat ccttaacaac cagaagtctt cagtttaggg t 2201

```

<210> 57

<211> 2435

<212> DNA

<213> Homo sapien

<400> 57

```

ccccttccag tccttgctcc ttcaatagac agaagcacga aacctccccct agatcgttca 60
ttagctccgt ttgatagaga acccttcaca ctaggggagg ttgctgtctt ctgtctattg 120
aaggagcacg aaacctcccc tagatcgttc attagctccg tttgatagag aaccttcac 180
actaggaaag aaaccaccat tttctgacaa gccctcgatt ccagcgggaa ggtcactcgg 240
ggagcattta cccaagattc aaaagcctcc tttaccaccg accacggaaa gacatgaaag 300
gagcagcccc ctgccaggga agaagccacc tgtgccaaag catggatggg gaccagacag 360
aagagagaat gatgaagatg atgtgcatca gagacctttg cccagccag cactacttcc 420
tatgagctcc aacactttcc cttcaagatc tactaagcca agtcccatga accctctccc 480
atcctctcac atgcctggag cattctcaga aagtaacagc agttttccac agagtgcctc 540
cctgccacca tacttctctc aaggccctag caacagacca cctatcagag ccgaaggcag 600
aaacttcccc ttgccacttc caaacaacc tcggccccc tccccgcgg aggaagagaa 660
ttcattaaat gaagagtggg acgtttctta tattaccoga ccagaggcag aagctgctct 720
tagaaagata aaccaggatg gaaacatttc tcacatttat gtcttctaac acacgtgggt 780
aaagaatcag taactgcca tgaatgagat agcataaaat tttgactttc ataaaacaaa 840

```

99

acttgtaa at ctttctgaa atttataagg ttccagctg acaattttct gccaaagtaa 900
 ctttcaaaa atgaaaaaca aaatcaatgt gtattttaga gtatcatcta gatctgcgcc 960
 cctttgtaaa tggattctat ggtggttaag tcatctagaa acaccctggg agcaagggtc 1020
 catcctacta cticctaatt acatctgac tgctttat ttgtgtctc ttatactag 1080
 ctgtttctaa ctggggggcg gttatggaat gtttcttagt gacagctggg gcctgccaat 1140
 ctcatcatt gttttctact tctgcacgtg catcagagac ctttgccca gccagcacta 1200
 ctccctatga gctccaacac ttcccttca agatctacta agccaagtcc catgaaccct 1260
 ctcccatcct ctacatgcc tggagcattc tcagaaagta acagcagttt tccacagagt 1320
 gcctccctgc caccatactt ctctcaaggc cctagcaaca gaccacctat cagagccgaa 1380
 ggcagaaaact tcccttgcc acttccaaac aaacctcggc ccccatcccc cgcggaggaa 1440
 gagaattcat taaatgaaga gtggtacgtt tcttatatta cccgaccaga ggcagaagct 1500
 gctcttagaa agataaaaca ggatggcaca ttcttggtca gagacagctc taaaaaaca 1560
 acaaccaatc catatgtcct catggtgttg tacaagata aagtttaca catccagatc 1620
 cgttatcaga aggaaagtca agtttacttg ttgggaactg gactccgagg gaaagaggac 1680
 tttctgtctg tgtcagatat tattgactac ttcaggaaaa tgccacttct gtcattgat 1740
 gggaaaaacc gaggttccag ataccagtgc acattaacgc atgtgcagg gtacccatag 1800
 caagttatag ccgagcaaat gaacctcct cctgcctctg ttgccaacac gagatcaatc 1860
 agccttggtc aatggacaaa cacttaggac tgaactgaac ccctcccat gaacacaagg 1920
 gttttatcct ttctttaaa aacagtgtt gaaatgaaga ctgtcaacta tccataatt 1980
 tattttatct tcttcaatgt ttgtaaagt catgagtcatt gttcacactt gaagtctagt 2040
 agtgcactgt aataattcat tttttaaaag attatttaatt gccatttca aaatacagta 2100
 gtttacacag ctacagaaac aatttggggc aagttttaaa aactgaaac agtaatagtt 2160
 attggtgtca cataaaactg atttgtttt tacagccaaa cctctgtcag tcagaggcat 2220
 tcattagttt tatacatgta atttgaaaat cactaaacct cgttttctca gcagcaataa 2280
 ttttaagggc ttcaaaaata taatttact cttatttagt attttttct gggggcattt 2340
 ttacgtaatt tttttatgaa aagacaaatg catgttgaga taacttctgg gattaaaata 2400
 gtcttttct ttaaaaaacc tcgcccgcac cagc 2435

<210> 58
 <211> 3612
 <212> DNA
 <213> Homo sapien

<400> 58

100

cgaactccgc cccctcttct ccgcgtaggc ccagctccct gaagcggctg tttcgagcca	60
cgcgcccatc gggtagcgag gcacgcgccg ggcgtcacgt gcgtttcgcg gcgagcgaa	120
atgacgcgag ttgtgtgagc cgccagtatg gccgggctat ggcggcgagc actggctacg	180
tgcgactgtg gggagcggcg cggctgctggg tgctgcggcg gccgatgctg gccgccgccg	240
ggggcggggt tccactgca gcaggagcgt ggttgctccg aggccagcgg acctgcgacg	300
cctctcctcc ttgggcactg tggggccgag gcccggaat tgggggcaa tggcggggt	360
tttggaagc gagcagccgc ggcggaggcg cattctcggg ggcgaggac gcctccgagg	420
gcggcgcgga ggaaggagcc ggcggcgcg ggggcagcgc ggcgcgggg gaaggcccg	480
tcataacggc gctcacgccc atgacgatcc ccgatgtgtt tccgcacctg ccgctcatcg	540
ccatcacccg caaccgggtg ttcccgcgct ttatcaagat tatcgagggt aaaaataaga	600
agttgggtga gctgctgaga aggaaagttc gtctcgccca gccttatgtc ggcgtcttc	660
taaagagaga tgacagcaat gagtccgatg tggtcgagag cctggatgaa atctaccaca	720
cggggacgtt tgcccagatc catgagatgc aggaccttg ggaacaagctg cgcgatgatc	780
tcattgggaca cagaagagtc catatcagca gacagctgga ggtggagccc gagagccgg	840
aggcgagaaa caagcacaag ccccgacgga agtcaaagcg gggcaagaag gagcgagg	900
acgagctgag cgccaggcac ccggcgagc tggcgatgga gccacccct gagctcccg	960
ctgagggtgct catggtggag gtagagaacg ttgtccacga ggacttccag gtcacggagg	1020
aggtgaaagc cctgactgca gagatcgtga agaccatccg ggacatcatt gccttgaacc	1080
ctctctacag ggagtcatg ctgcagatga tgcaggctgg ccagcgggtg gtggacaacc	1140
ccatctacct gagcgacatg ggcgccgcgc tcaccggggc cgagtcccat gagctgcagg	1200
acgtcctgga agagaccaat attcctaagc ggctgtacaa ggccctctcc ctgctgaaga	1260
aggaatttga actgagcaag ctgcagcagc gcctggggcg ggaggtggag gagaagatca	1320
agcagaccca ccgtaagtac ctgctgcagg agcagctaaa gatcatcaag aaggagctgg	1380
gcctggagaa ggacgacaag gatgccatcg assagaagtt ccgggagcgc ctgaaggagc	1440
tcgtgggtccc caagcacgtc atggatgttg tggacgagga gctgagcaag ctgggcctgc	1500
tggacaacca ctctcgag ttcaatgtca cccgcaacta cctagactgg ctcacgtcca	1560
tcccttgggg caagtacagc aacgagaacc tggacctggc gcgggcacag gcagtgtgg	1620
aggaagacca ctacggcatg gaggacgtca agaaacgcat cctggagttc attgccgtta	1680
gccagctccg cggctccacc cagggaaga tcctctgctt ctatggcccc cctggcggtg	1740
gtaagaccag cattgctcgc tccatcgccc gcgcctgaa ccgagagtac ttccgcttca	1800
gcgtcggggg catgactgac gtggctgaga tcaaggcca caggcgacc tacgtggcg	1860

101

ccatgcccgg gaagatcatc cagtgtttga agaagaccaa gacggagaac cccctgatcc 1920
 tcatcgacga ggtgcgtgcg gagaggcccg gagacccccct aaccggcaa tgccgtgtgc 1980
 aagatgaagc cgagccttcc gggtcctagg atccccgagc caactcaggg gccatcgccg 2040
 tgatgctggc cctgatggca cggacgggtc cctcccaccc acagccacgc ccagcaggct 2100
 gcccgtccaa ggcagggtgt gggtgccgct ctcaactcggg gtctcccag ccctgaccct 2160
 ggggtctccc cactgsgcgg gctggccagg ggcacggcga ggggcaccac ctgctgtctg 2220
 ctgccccagg tggacaagat cggccgaggc taccaggggg acccgctcgtc ggcactgctg 2280
 gagctgctgg acccagagca gaatgccaac ttcctggacc actacctgga cgtgcccgtg 2340
 gacttgtcca aggtgggggg cctgtctggg gcctgggctt gctggggagg gtaagcggcc 2400
 agtccccag caccttgccg ccgccccag gtgctgttca tctgcacggc caacgtcacg 2460
 gacaccatcc ccgagccgct gcgagaccgt atggagatga tcaacgtgtc gggctacgtg 2520
 gccaggaga agctggccat tgcggagcgc tacctgggtgc cccaggctcg cgccctgtgt 2580
 ggcctggatg agagcaaggc caagctgtca tcggacgtgc tgacgtgtc catcaagcag 2640
 tactgcccg agagcgggtg ccgcaacctg cagaagcaag tggagaagggt gttacggaaa 2700
 tcggcctaca agattgtcag cggcgaggcc gagtccgtgg aggtgacgcc cgagaacctg 2760
 caggacttcg tggggaagcc cgtgttcacc gtggagcgca tgtatgacgt gacaccgcc 2820
 ggcgtggta tggggctggc ctggaccgca atgggaggct ccacgctgtt tgtggagaca 2880
 tccttgagac ggccacagga caaggatgcc aagggtgaca aggatggcag cctggagggtg 2940
 acaggccagc tgggggagggt gatgaaggag agcggccgca tagcctacac cttcgccaga 3000
 gccttctca tgcagcacgc ccccgccaat gactacctgg tgacctcaca catccacctg 3060
 catgtgcccg agggcgccac cccaaggac ggccaagcg caggctgcac catcgtcacg 3120
 gccctgctgt cctggccat gggcaggcct gtccggcaga atctggccat gactggcgaa 3180
 gtctccctca cgggcaagat cctgcctgtt ggtggcatca aggagaagac cattgcggcc 3240
 aagcgscag gggtgacgtg catcgtcctg ccagccgaga acaagaagga cttctacgac 3300
 ctggcagcct tcatcaccga gggcctggag gtgcacttcg tggaaacta ccgggagatc 3360
 ttgcacatcg ccttcccga cgagcaggca gaggcgctgg ccgtggaacg gtgacggcca 3420
 ccccgggact gcaggcggcg gatgtcaggc cctgtctggg ccagaactga gcgctgtggg 3480
 gagcgcgccc ggacctggca gtggagccac cgagcgagca gctcggtcca gtgaccaga 3540
 tcccagggac ctcagtcggc ttaatcagag tgtggcatag aagctattta atgattaaag 3600
 tcatttgag ta 3612

<210> 59
 <211> 2744
 <212> DNA
 <213> Homo sapien

<400> 59
 tcctgggttc acgccattct cctgcctcag cctcccgagt agctgggact acaggcgccc 60
 gccatcacgc ccgcctaatt tttgtathtt ttggtagaga cgggggtttca ctgtgttagc 120
 caggaggggc tcgatctcct gacctcatga tccaccogcc tcggcctccc aaagtgcctg 180
 gattacaggc gtgagccacc acgcccggcc aagacttggg ctcttaaaaa atggaggaaa 240
 gaaaacacag tctctttttt tcccctgaga tagcttatcc taaggacaag gctctgaggg 300
 gtaaggagac aggggttggg tttagttttg actctcttgg tcctgtgtcc ctgggactgg 360
 tgagtccacc agggactgca ctctccatc tcccaggccg tccgtggcca gggccagtg 420
 gcggagggga gggagttagt ggagctggtg ggtggggctc ccaggggccat gctcccaccc 480
 agcccacccc ctgctggagc actgctgggc ccagcgacc ctgccccata ctggcgcccc 540
 tgactgcaga gatcgtgaag accatccggg acatcattgc ctgaaccct ctctacaggg 600
 agtcagtgtc gcagatgatg caggctggcc agcgggtggg ggacaacccc atctacctga 660
 gcgacatggg cgccgcgctc accggggccg agtcccatga gctgcaggac gtccctggaag 720
 agaccaatat tctaagcgg ctgtacaagg ccctctccct gctgaagaag gaatttgaac 780
 tgagcaagct gcagcagcg ctggggcggg aggtggagga gaagatcaag cagaccaccc 840
 gtaagtacct gctgcaggag cagctaaaga tcatcaagaa ggagctgggc ctggagaagg 900
 acgacaagga tgccatcgag gagaagttcc gggagcgctc gaaggagctc gtgggtcccca 960
 agcacgtcat ggatgttggt gacgaggagc tgagcaagct gggcctgctg gacaaccact 1020
 cctcggagtt caatgtcacc cgcaactacc tagactggct cactccatc ccttggggca 1080
 agtacagcaa cgagaacctg gacctggcg gggcacaggc agtgctggag gaagaccact 1140
 acggcatgga ggacgtcaag aaacgcattc tggagtcat tgccgttagc cagctccgcg 1200
 gctccaccca gggcaagatc ctctgcttct atggccccc tggcgtgggt aagaccagca 1260
 ttgctcgctc catcgccgc gccctgaacc gagagtactt ccgcttcagc gtcgggggca 1320
 tgactgacgt ggctgagatc aagggccaca ggcggacct cgtggcgcc atgcccggga 1380
 agatcatcca gtgtttgaag aagaccaaga cggagaaccc cctgatctc atcgacgagg 1440
 tggacaagat cggccgaggc taccaggggg acccgctcgt ggcaactgctg gagctgctgg 1500
 acccagagca gaatgccaac ttcttgacc actacctgga cgtgcccgtg gacttgtcca 1560
 aggtgctgtt catctgcacg gccaacgtca cggacaccat ccccgagccg ctgcgagacc 1620

103

gtatggagat gatcaacgtg tcgggctacg tggcccagga gaagctggcc attgcggagc 1680
 gctacctggt gccccaggct cgcgccctgt gtggcttgga tgagagcaag gccaaagctgt 1740
 catcggacgt gctgacgctg ctcatcaagc agtactgccg cgagagcggg gtccgcaacc 1800
 tgcagaagca agtggagaag gtgttacgga aatcggccta caagattgtc agcggcgagg 1860
 ccgagtccgt ggaggtgacg cccgagaacc tgcaggactt cgtggggaag cccgtgttca 1920
 ccgtggagcg catgtatgac gtgacaccgc ccggcgtggt catggggctg gcctggaccg 1980
 caatgggagg ctccacgctg tttgtggaga catccctgag acggccacag gacaaggatg 2040
 ccaagggtga caaggatggc agcctggagg tgacaggcca gctgggggag gtgatgaagg 2100
 agagcgcccc catagcctac accttcgcca gagccttcct catgcagcac gcccccgcca 2160
 atgactacct ggtgacctca cacatccacc tgcattgtgc cgagggcgcc accccaagg 2220
 acggcccaag cgcaggctgc accatcgtca cggccctgct gtccctggcc atgggcaggc 2280
 ctgtccggca gaatctggcc atgactggcg aagtctccct cacgggcaag atcctgcctg 2340
 ttggtggcat caaggagaag accattgcgg ccaagcgcgc aggggtgacg tgcattgtcc 2400
 tgccagccga gaacaagaag gacttctacg acctggcagc ctcatcacc gagggcctgg 2460
 aggtgcactt cgtggaacac taccgggaga tcttcgacat cgccttcccg gacgagcagg 2520
 cagaggcgct ggccgtggaa cggtgacggc caccocggga ctgcaggcg cggatgtcag 2580
 gccctgtctg ggccagaact gagcgtgtg gggagcgcgc ccggacctgg cagtggagcc 2640
 accgagcgag cagctcggtc cagtgaacca gatccaggg acctcagtcg gcttaatcag 2700
 agtgtggcat agaagctatt taatgattaa agtcatttgc agta 2744

<210> 60
 <211> 2742
 <212> DNA
 <213> Homo sapien

<400> 60
 cgaactccgc cccctcttct ccgcgtaggc ccagctccct gaagcggtg tttcgagcca 60
 cgcgcccata gggtagcgag gcacgcgccg ggcgtaacgt gcgtttcgcg gcgagcggaa 120
 atgacgcgag ttgtgtgagc cgccagtatg gccgggtat ggccggcagc actggctacg 180
 tgcgactgtg gggagcggcg cgggtgtggg tgctgcggcg gccgatgctg gccgcgcgcg 240
 gggggcgggt tcccactgca gcaggagcgt ggttgcctcg aggccagcgg acctgcgacg 300
 cctctcctcc ttgggcactg tggggccgag gcccgcaat tgggggcaa tggcggggt 360
 tttgggaagc gagcagccgc ggcgaggcg cattctcggg gggcgaggac gcctccgagg 420
 gcggcgcgga ggaaggagcc ggcggcgcg ggggcagcgc gggcgccggg gaaggcccg 480

104

tcataacggc gctcacgccc atgacgatcc cccgatgtgtt tccgcacctg ccgctcatcg	540
ccatcacccg caaccgggtg ttcccgcgct ttatcaagat tatcgagggtt aaaaataaga	600
agttggttga gctgctgaga aggaaagttc gtctcgccca gccttatgtc ggcgtctttc	660
taaagagaga tgacagcaat gagtcggatg tggtcgagag cctggatgaa atctaccaca	720
cggggacgtt tgcccagatc catgagatgc aggaccttgg ggacaagctg cgcgatgatcg	780
tcatgggaca cagaagagtc catatcagca gacagctgga ggtggagccc gaggagccgg	840
aggcggagaa caagcacaag ccccgagga agtcaaagcg gggcaagaag gaggcggagg	900
acgagctgag cgccaggcac ccggcggagc tggcgatgga gcccaccctt gagctcccgg	960
ctgaggtgct catggtggag gtagagaacg ttgtccacga ggacttccag gtcacggagg	1020
aggtgaaagc cctgactgca gagatcgtga agaccatccg ggacatcatt gccttgaacc	1080
ctctctacag ggagtcagtg ctgcagatga tgcaggctgg ccagcgggtg gtggacaacc	1140
ccatctacct gagcgacatg ggcgccgcgc tcaccggggc cgagtcccat gagctgcagg	1200
acgtcctgga agagaccaat attcctaagc ggctgtacaa ggccctctcc ctgctgaaga	1260
aggaatttga actgagcaag ctgcagcagc gcctggggcg ggaggtggag gagaagatca	1320
agcagaccca ccgtaagtac ctgctgcagg agcagctaaa gatcatcaag aaggagctgg	1380
gcctggagaa ggacgacaag gatgccatcg aggagaagtt ccgggagcgc ctgaaggagc	1440
tcgtgggtccc caagcacgtc atggatgttg tggacgagga gctgagcaag ctgggcctgc	1500
tggacaacca ctctcggag ttcaatgtca cccgcaacta cctagactgg ctcacgtcca	1560
tcccttgggg caagtacagc aacgagaacc tggacctggc gcgggcacag gcagtgtctg	1620
aggaagacca ctacggcatg gaggacgtca agaaacgcac cctggagtcc attgccgtta	1680
gccagctccg cggctccacc cagggaaga tcctctgctt ctatggcccc cctggcgtgg	1740
gtaagaccag cattgctcgc tccatcgccc gcgccctgaa ccgagagtac ttccgcttca	1800
gcgtcggggg catgactgac gtggctgaga tcaagggcca caggcggacc tacgtgggcg	1860
ccatgcccgg gaagatcatc cagtgtttga agaagaccaa gacggagaac cccctgatcc	1920
tcatcgacga ggtggacaag atcgcccgag gctaccaggg ggaccctcg tcggcactgc	1980
tggagctgct ggaccagag cagaatgcca acttcctgga ccactacctg gacgtgcccc	2040
tggacttgct caaggtgctg ttcatctgca cggccaacgt cacggacacc atccccgagc	2100
cgctcgagga ccgatggag atgatcaacg tgtcgggcta cgtggcccag gagaagctgg	2160
ccattgcgga gcgctacctg gtgccccagg ctgcgcctt gtgtggcttg gatgagagca	2220
aggccaagct gtcacggac gtgctgacgc tgctcatcaa gcagtactgc cgcgagagcg	2280
gtgtccgcaa cctgcagaag caagtggaga aggtgttacg gaaatcggcc tacaagattg	2340

105

tcagcggcga ggccgagtcg gtggagggtga cgcccagagaa cctgcaggac ttcgtgssga 2400
 agcccgtggt caccgtggag cgcatgtatg acgtgacacc gcccgscgtg gtcattggggc 2460
 tggcctggac cgcaatgggt gagcgtgggt gcgggagaag accccaaagc cattccatt 2520
 tctacccgag aacaagcagg tcccaccttg tacacctgtg cagtgggcct cagggtggctc 2580
 tgaacggcct ctggcggggg gtggtgtgct gggagcccag gsggtctggg ctgagcggag 2640
 ggaaggctgt gacacatggg ggtggcagca caccatgggc cttatggatt tgggtgccac 2700
 tttgataggc ttacaggtaa ggacaagctc atccagatgg gc 2742

<210> 61
 <211> 2116
 <212> DNA
 <213> Homo sapien

<400> 61
 tgttgactg gctggagtag agtggtgcag ttcagctca ctgcaacctc cgctctctgg 60
 gttcaagcga ttctcctgcc tcagcctccc gagaagctgg aattacaggc atgcgccacc 120
 acgcccagct aattttgtat ttttagtaaa gatgggtgtt ctccatgttg gtcaggctgg 180
 tctcgaactc ccgacctcag gtgatccgcc cacctcggcc tcccaaagtg ctggcatgac 240
 agagctagag ctcgsgccca gccccaggct gcagcccatt cgcaggcacc cgaaagaact 300
 tccccagtat ggtgggtcctg gaaaggacat ttttgaagat caactatata ttctctgtga 360
 ttccgatgga atttcagttc atcagatgtt caccatggcc accgcagaac accgaagtaa 420
 ttccagcata gcggggaaga tgttgaccaa ggtggagaag aatcacgaaa aggagaagtc 480
 acagcaccta gaaggcagcg cctcctcttc actctcctct gattagatga aactgttacc 540
 ttaccctaaa cacagtattt ctttttaact tttttatttg taaactaata aaggtaatca 600
 cagccacca aattccaagc taccctgggt acccttctgc agtagaagct agtgagcatg 660
 tgagcaagcg gtgtgcacac ggagactcat cgttataatt tactatctgc caagagtaga 720
 aagaaaggct ggggatattt ggggtggctt ggttttgatt ttttgcttgc ttgtttgttt 780
 tgtactaaaa cagtattatc ttttgaatat cgtagggaca taagtatata catgttatcc 840
 aatcaagatg gctagaatgg tgcctttctg agtgtctaaa acttgacacc cctggtaaat 900
 ctttcaacac acttccactg cctgcgtaat gaagttttga ttcatTTTTA accactggaa 960
 tttttcaatg ccgtcatttt cagttagatg attttgcact ttgagattaa aatgccatgt 1020
 ctatttgatt agtcttattt ttttattttt acaggcttat cagtctcact gttggctgtc 1080
 attgtgacaa agtcaaataa acccccaagg acgacacaca gstatggatca catattgttt 1140
 gacattaagc ttttgccaga aaatgttgca tgtgttttac ctgcacttgc taaaatcgat 1200

tagcagaaag gcatggctaa taatgttggg ggtgaaaata aataaataag taaacaaaat 1260
 gaagattgcc tgctctctct gtgcctagcc tcaaagcgtt catcatacat cataccttta 1320
 agattgctat attttgggtt attttcttga caggagaaaa agatctaaag atcttttatt 1380
 ttcattctttt ttggttttct tggcatgact aagaagctta aatgttgata aaatatgact 1440
 agttttgaat ttacaccaag aacttctcaa taaaagaaaa tcatgaatgc tccacaattt 1500
 caacatacca caagagaagt taatttctta acattgtgtt ctatgattat ttgtaagacc 1560
 ttcaccaagt tctgatatct tttaaagaca tagttcaaaa ttgcttttga aaatctgtat 1620
 tcttgaaaat atccttgttg tgtattaggt ttttaaatac cagctaaagg attacctcac 1680
 tgagtcatca gtacctcct attcagctcc ccaagatgat gtgtttttgc ttaccttaag 1740
 agaggttttc ttcttatttt tagataattc aagtgcctag ataaattatg ttttctttta 1800
 gtgtttatgg taaactcttt taaagaaaa ttaatatgtt atagctgaat ctttttggta 1860
 actttaaatc tttatcatag actctgtaca tatgttcaaa ttagctgctt gcctgatgtg 1920
 tgtatcatcg gtgggatgac agaacaaaca tatttatgat catgaataat gtgctttgta 1980
 aaaagatttc aagttattag gaagcatact ctgtttttta atcatgtata atattccatg 2040
 atacttttat agaacaattc tggcttcagg aaagtctaga agcaatattt cttcaaataa 2100
 aagggtttta aacttt 2116

<210> 62
 <211> 1855
 <212> DNA
 <213> Homo sapien

<400> 62
 gggggcgggg aagtggcggc tgaagcggc cggcgggggc tcaactgtggg ggtgtgagtg 60
 ggagggcggc gcgctgggtg ctgcagctgg ggtgaggcgc gaggcggcgc actcgacggc 120
 tgactggagc agcggtaaag gcgaggatgg agaccgaagg atataagtca aagagtacag 180
 cagaaaatgt ctactgaacg gacttcttgg acaagcctgt ccaccattca gaaaatagcc 240
 ctgggccttg ggatcccagc cagtgcaca gttgcctata tctataaccg caggatatagg 300
 gaaagcagag aagagcggct gacatttgtt ggggaagatg acattgagat agagatgcgg 360
 gttccccagg aggctgtgaa actcatcatt ggccggcaag gagccaatat taaacagctg 420
 cggaaacaga cagggtgctc gattgatgtg gacacagagg atgtaggcga tgagcgagtg 480
 ctgcttatca gtggtttttc tgttcagggt tgcaaggcca aagcagcaat ccatcagatc 540
 ctgacagaga ataccccagt gtctgagcag ctttcagttc ccagagatc tgtgggcaga 600
 atcataggga gagggcggca gacaattcgt tctatctgta aggcattctgg agccaaaatt 660

107

acctgtgaca aagaatcaga agggacatta ctactatcaa gacttataaa aatctcagga 720
 acacagaagg aagtggcagc agccaagcat ttgatactgg agaaagtttc agaagatgaa 780
 gaacttcgga agagaattgc tcattctgca gaaaccaggg tcccacgcaa acagccaatc 840
 agtgtgagaa gagaagacat gacagagcca ggtggagctg gagagccagc attatggaaa 900
 aacaccagtt ctagcatgga gccgactgca cccctgggtga ctctccacc caaaggagga 960
 ggcgacatgg ctgtggtagt gtcaaaggaa ggttcctggg agaaacctag tgatgacagc 1020
 tttcagaagt ctgaagccca ggccatccca gagatgcccc tgtttgaaag tatgtaacaa 1080
 agagggagcc cattaatcat tgaagataga aatactggct tagatattgg agagattaga 1140
 aggaatgcct tctcagtcctg agcagccagt ataatatggc tggggtcagg acagaagatt 1200
 cggtaagata ttttgaagat gggatggagg tagaatccac accaacagtt gctggacagt 1260
 ttgaggatgc agatgttgat cactgaaaat gatattatgca ggtataagat tctgctccta 1320
 attgtaggag agaacttggg gcctcttcca ctctgaagca aagttgatga aagtcttctt 1380
 ccttttccca aaaccaacc tgaactactt ctttcttggg gacagactat attgagacaa 1440
 gttgttacca gcaaaagata gatacatgac ctttattaac aaaaatgaat taaccaagag 1500
 gatatttgta gtttattatt taccctaaac tttctgtgtc tgggtaccct ctgagtaggc 1560
 ctataattcc tgccttcact gtatgcattt tatgtaagct agcagacctt tgtggtgaga 1620
 atgcacagga gcttggaggt ataaatagac aggggtgggaa agagagagct cctttcgcca 1680
 tgttttacca gcccgctctg ttataacctc ttaggttata ttctttaatt tccaaccttt 1740
 taggttagtt tctgtaacag aacaaatgag tctgggataa agtcctcaa gtacttcaa 1800
 tggtaatgt tttgtttttg taacggctta acaaataacc taggttttct gttta 1855

<210> 63

<211> 1136

<212> DNA

<213> Homo sapien

<400> 63

sgctaggtac aggcggkgt kaatcgccg aggcgcacgt gctggaaggc ccagacacca 60
 acaccacgat cattcagctg cagcccttgc aggagcccga gagctgggag cgacgcaga 120
 gtggcctgca gtectacctg ctccagttcc acggcctcgt gcgcctggtg caccaggagc 180
 ggaccttggc ctttctctg accatccgct gcttcctggg ctgtgagctg cctcccgagg 240
 gctctagagc ccatgtcttc ttcgaaagtg ctgtgaatgg gagctccttt gtgagtttcc 300
 ggccggagag agccttgtgg caggcagaca cccaggtcac ctccggagtg gtcaccttca 360
 ccctgcagca gctcaatgcc tacaaccgca ctcggtatga actgcgggaa ttcttgagg 420

108

acacctgtgt gcagtatgtg cagaaacata tttccgcgga aaacacgaaa gggagccaaa 480
 caagccgctc ctacacttcg ctggtcctgg gcgtcctggg gggcagtttc atcattgctg 540
 gtgtggctgt aggcattctc ctgtgcacag gtggacggcg atgttaatta ctctccagcc 600
 ccgtcagaag gggctggatt gatggaggct ggcaagggaa agtttcagct cactgtgaag 660
 ccagactccc caactgaaac accagaagggt ttggagtgaac agctcctttc ttctcccaca 720
 tctgcccact gaagatttga gggaggggag atggagagga gaggtggaca aagtacttgg 780
 tttgctaaga acctaagaac gtgtatgctt tgctgaatta gtctgataag tgaatgttta 840
 tctatctttg tggaaaacag ataatggagt tggggcagga agcctatggc ccatcctcca 900
 aagacagaca gaatcacctg aggcgttcaa aagatataac caaataaaca agtcatccac 960
 aatcaaaata caacattcaa tacttccagg tgtgtcagac ttgggatggg acgtcgatat 1020
 aatagggtag aaagaagtaa cacgaagaag tgggtggaaat gtaaaatcca agtcatatgg 1080
 cagtgatcaa ttattaatca attaataata ttaataaatt tcttatattt aaggca 1136

<210> 64
 <211> 2320
 <212> DNA
 <213> Homo sapien

<400> 64
 cgggatagct gtcttgagcc ccaagcctct tctcccccg ctgcccctct gcagccattc 60
 gggatgggac cccctctggg gtgtcagcac gaaagggcta acgggagccc ctctcttggc 120
 ctccccctgt aggttacaga gccatcacgg tgcggaagct catgcagggc atgggccttg 180
 gcctctccag cgtctttgct ctgtgcctgg gccacacctc cagcttctgt gagtctgtgg 240
 tctttgcata agcctccata ggctccaga ccttcaacca cagtggcatt tctgttaaca 300
 tccaggactt ggccccgtcc tgcgcgggt tctgttttg tgtggccaac acagccgggg 360
 ccttggcagg tgtctgtggg gtgtgtctag gcggctactt gatggagacc acgggctcct 420
 ggacttgctt gttcaacctt gtggccatca tcagcaacct ggggctgtgc accttcttg 480
 tgtttggaca ggctcagagg gtggacctga gctctacca tgaggacctc tagctcccaa 540
 cccacagcc tctccaagga ccagggcgc agcagcccg ggacacaggg gactcagtgt 600
 gtgggacttg gtcactccat gtcagacaca cgagcagaga ggaacacaaa cactgtgga 660
 gcctgaagct ccttaagaag agtcacaaac agctgggtgg aggggtgggt gggcctgggt 720
 ccagaccagg ctgctgtctc tctgggcctc agtttcccca cctgccagcg ggctcgccc 780
 tgtcctcctc acaggctggg gtggccgtca ggggtgggtg ggttattgtt agtaggcgca 840
 gcctcattcc caccacgata tgttccgctt ggttccgcgc aaacctccct cggtcgccc 900

109

gttctccgca agcctcctgc agcgcccgcc tgccaatgtg aggctggcac caggctgcag 960
 cctccccaat cccagcccac ttgtgtgtgt ctctggcggg ctgtcctcct tggtagggagc 1020
 tgtcctgcac actgtaggat gcttaaaggt atccctggcc tccaccatc cctagccagc 1080
 agctcccagt cagacaacag ccagaaatgt ctccagactc tgcccagcct ccccgagtag 1140
 ccaccctcga gacatgacct cagagtctct gtgtctccta gaagcctgac agagaccccc 1200
 agggcagtggt gtgggtggcg ggctagagac ccttgccctgt gtccgggacc ctggcgccgc 1260
 tctccctcc tgtggatccc tccgcactaa cagtgttctc agtgggcaga cgctgggca 1320
 ccccttgggc cctgcccagc atggccatgg cgcaggctct cgaacccgca tggctttccc 1380
 aggctgggtg attctgctct ccagggacgg ttggcacctt cctcgggggc gggcccccacg 1440
 cccccagaa cacacagacc cacctttctg gcgttctttc tacctccctt ttcgttgctt 1500
 gaggagctgg tggtttcatg agttaatgat acatcttgca aggtgtacac atagagaaaa 1560
 aaacctaaaa atgtggaaaa gcacgcaaaa gccttattta aataataact attaaactat 1620
 tcaaaaagaa aaaaaaaaaa caaacaaaaa acataaaaac aaaaaaaca aaagaaaaaa 1680
 aaaaaaaca aaacaggggg gcgggcgcgc cccagaagaa atcccgcgcg cggggggcgcg 1740
 cccaataac cgcgcgacca cccggcttcc ttgttagcac acaacagggg ggggcgcccc 1800
 acaagaacga gcgagcgac cgtagtcata actatacgca gcgcgagctc cgatggccgc 1860
 gccacacac ctcaaccaca cagtctggg tacacctgc ggcaaccaa cgctggccac 1920
 aaccggcgcg aaacatcttg cgtggagaga aaggcgacc gctcacacta cccagcgag 1980
 agcgaggagc ggcaaccaa acatcggtgt gggggccgc gacaaacctc cctcactcct 2040
 caaccatgcg cgacgatctt cattaccaa tgcctccct cgctcgacgg gcggcgacga 2100
 atcgctcacc acacacaatc catcttattc acacggccgt cgcgctatcc tccacgcgtg 2160
 tgtggtgcct catcacaccg aacgacgggt cgcacataa atatgtcgac ccggcccgcg 2220
 ctagctcgtc aggaatatga agatttcgtg ctggctcaat cttaggaggc agaaattgca 2280
 ctcgatcggt cgtcgctgac gaacacacat ttctttctcc 2320

<210> 65

<211> 1609

<212> DNA

<213> Homo sapien

<400> 65

agcggggaga aacgttgacg cccgcgccga acgcccggca gcacaaagga tccccgactg 60

ccggggagcg gtgctcgag ggcacaggct tacgccatcc cccacgcagt ttcggagatg 120

gagcgctggg cccatggagg gaaggcggca ggctcggcgg ctccggcagc ttgctggggc 180

110

aggggctcaa ggccggcagtc cgatagtggg ggccgctgag aactgtcacg gagctgcgtc 240
 tgtacagcga gcatccctta tttattcagg gcgagtgtgt atttggggcg gcgtgcaggg 300
 ggctgacaaa gaccggagag ctcccgggtg ggccgcccggc ggagcgaaga ctggaacccg 360
 tatgagcgcc cccagcgcc cctgagcgct cgccgcccgt gcacggcgca ccccgccgga 420
 ggccgggatc agcaaagccg tgcgccccga ggcccgcccc cgtctccgca caaagaccga 480
 gctggaggat cttcagaaga agcctcccc atacctgcgg aacctgtcca gcgatgatgc 540
 caatgtcctg gtgtggcacg ctctcctcct acccgaccaa cctccctacc acctgaaagc 600
 cttcaacctg cgcatacagct tcccgcggga gtatccgttc aagcctocca tgatcaaatt 660
 cacaaccaag atctaccacc ccaacgtgga cgagaacgga cagatttgcc tgcccatcat 720
 cagcagttag aactggaagc cttgcaccaa gacttgccaa gtccctggagg ccctcaatgt 780
 gctgggtgaat agaccgaata tcagggagcc cctgcggatg gacctcgctg acctgctgac 840
 acagaatccg gagctgttca gaaagaatgc cgaagagtcc acctccgat tcggagtgga 900
 ccggccctcc taactcatgt tctgaccctc tgtgcactgg atcctcggca tagcggacgg 960
 acacacctca tggactgagg ccagagcccc ctgtggcccc ttccccatc atttttccct 1020
 tcttaggttg ttagtcatta gtttgtgtgt gtgtgtggtg gagggaaagg agctatgagt 1080
 gtgtgtgttg tgtatggact cactcccagg ttcacctggc cacagggtga cccttccac 1140
 acctttaca ttcccagag ccaaggaggt ttaagtttg agttacaggc cagtctcca 1200
 gctctccatc ttagagagac aggtcacctt gcaggcctgc ttgcaggaaa tgaatccagc 1260
 agccaactcg aatcccccta gggctcaggc actgagggcc tggggacagt ggagcatatg 1320
 ggtgggagac agatggaggg taccctattt acaactgagt cagccaagcc actgatggga 1380
 atatacagat ttaggtgcta aaccgtttat ttccacgga tgagtcacaa tctgaagaat 1440
 caaacttcca tctgaaaat ctatatgttt caaaaccact tgccatcctg ttagattgcc 1500
 agttccctgg accaggctc agactgtgaa gtatatatcc tccagcattc agtccaggg 1560
 gagccacgga aaccatgttc ttgcttaagc cattaaagtc agagatgaa 1609

<210> 66
 <211> 1414
 <212> DNA
 <213> Homo sapien

<400> 66
 tcttgctga aacttgtgat aacaactggg tgcattctca gtgcaggaaa agtccctggc 60
 atcttggtgc caggcattct gctactgctg gtgggtgggtt atgaacacag atgaccagga 120
 tgaagtcctt gccttggaat aagcccatag cccatcccat aatttgatgc ctgtattact 180

111

```

agagtcctga gaaacacgga atgctgatta gaatttgga caaagttccc tgagtattct 240
ctggaggaaa agatgcgag gtggacctgg aaggcctcct gsagagctgg aggatcttca 300
gaagaagcct ccccatacc tgcggaacct gtccagcgat gatgccaatg tcctgggtgtg 360
gcacgctctc ctctacccg accaacctcc ctaccacctg aaagccttca acctgcgcat 420
cagcttcccc cgaggatata cgttcaagcc tcccatgata aaattcaca ccaagatcta 480
ccaccccaac gtggacgaga acggacagat ttgcctgccc atcatcagca gtgagaactg 540
gaagccttgc accaagactt gccaaagtcc ggaggccctc aatgtgctgg tgaatagacc 600
gaatatcagg gagccctgc ggatggacct cgctgacctg ctgacacaga atccggagct 660
gttcagaaag aatgccgaag agttcacctc ccgattcgga gtggaccggc cctcctaact 720
catgttctga ccctctgtgc actggatcct cggcatagcg gacggacaca cctcatggac 780
tgaggccaga gcccctgtg gcccatccc cattatctt tcccttctta ggttgtagt 840
cattagtttg tgtgtgtgtg tgggtggagg aaggagcta tgagtgtgtg tgtgtgtat 900
ggactcactc ccaggttcac ctggccacag gtgcacctt cccacacct ttacattccc 960
cagagccaag ggagtttaag ttgacgta caggccagtt ctccagctct ccatcttaga 1020
gagacaggtc accttgagg cctgcttgca ggaaatgaat ccagcagcca actcgaatcc 1080
ccctagggct caggcactga gggcctgggg acagtggagc atatgggtgg gagacagatg 1140
gagggtaacc tatttacaac tgagtcagcc aagccactga tgggaatata cagatttagg 1200
tgctaaaccg ttatttttcc acggatgagt cacaatctga agaataaac ttccatcctg 1260
aaaatctata tgtttcaaaa ccacttgcca tctgttaga ttgccagttc ctgggaccag 1320
gcctcagact gtgaagtata taccctccag cattcagtc agggggagcc acggaaacca 1380
tgttcttgct taagcatta aagtcagaga tgaa 1414

```

<210> 67
 <211> 1243
 <212> DNA
 <213> Homo sapien

```

<400> 67
agcggggaga aacgttgag cccgcgccga acgcccggca gcacaaagga tccccgactg 60
ccggggagcg gtgctcggag ggcacaggtc tacgccatcc cccacgcagt ttccggagatg 120
gagcgctggg cccatggagg gaaggcggca ggggaacctg tccagcgatg atgccaatgt 180
cctgggtgtg cacgctctcc tctacccga ccaacctccc taccacctga aagccttcaa 240
cctgcgcata agcttccgc cgagtatcc gttcaagcct cccatgatca aattcacaac 300
caagatctac ccccccaacg tggacgagaa cggacagatt tgctgccc tcatcagcag 360

```

112

tgagaactgg aagccttgca ccaagacttg ccaagtcctg gaggccctca atgtgctggc 420
 gaatagaccg aatatcaggg agcccctgcg gatggacctc gctgacctgc tgacacagaa 480
 tccggagctg ttcagaaaga atgccgaaga gttcaccttc cgattcggag tggaccggcc 540
 ctctaactc atgttctgac cctctgtgca ctggatcctc ggcatagcgg acggacacac 600
 ctcatggact gaggccagag ccccctgtgg ccattccccc attcattttt ccttcttag 660
 gttgttagtc attagtttgt gtgtgtgtgt ggtggaggga agggagctat gagtgtgtgt 720
 gttgtgtatg gactcactcc caggttcacc tggccacagg tgcacccttc ccacaccctt 780
 tacattcccc agagccaagg gagtttaagt ttgcagttac aggccagttc tccagctctc 840
 catcttagag agacaggtca ccttgcaggc ctgcttgag gaaatgaatc cagcagccaa 900
 ctogaatccc cctagggctc aggcactgag ggcctgggga cagtggagca tatgggtggg 960
 agacagatgg agggtagcct atttacaact gagttagcca agccactgat gggaatatac 1020
 agatttaggt gctaaaccgt ttattttcca cggatgagtc acaatctgaa gaatcaaaact 1080
 tccatcctga aaatctatat gtttcaaac cacttgccat cctgttagat tgcagttcc 1140
 tgggaccagg cctcagactg tgaagtatat atcctccagc attcagttca gggggagcca 1200
 cggaaacat gttcttgctt aagccattaa agtcagagat gaa 1243

<210> 68
 <211> 1507
 <212> DNA
 <213> Homo sapien

<400> 68
 ggggggtgggg tccccggggc ggggcggggc gcgctgtgtc gcgggtcggg gctcggtcct 60
 gctggaggcc acgggtgcca cacactcggc cccgacatga tggcgagcat gcgagtgggtg 120
 aaggagctgg aggatcttca gaagaagcct ccccatatac tgcggaacct gtccagcgat 180
 gatgccaatg tcttgggtgtg gcacgctctc ctctacccg aggcagaggt tgcggtgagc 240
 cgagatcaag ccattgcact ccagcctggg cagcaaagtg aaactccatc tcaaaaaaaaa 300
 aaaaaaaaaag aagcttggca ccagcatctc cttctgatga ggccctcagg aagcttccac 360
 tcatgggtgga aggcaaaggg gagccacgtg tacagatcac attgcaagag aagaagtga 420
 agagagagag agcgagcagg tgccaggatc ttctaaacaa ccagcttttt cagaccaacc 480
 tccctaccac ctgaaagcct tcaacctgcg catcagcttc ccgcccggagt atccgttcaa 540
 gcctcccatg atcaaattca caaccaagat ctaccacccc aacgtggacg agaacggaca 600
 gatttgcctg cccatcatca gcagtgaaga ctggaagcct tgcaccaaga cttgccaagt 660
 cctggaggcc ctcaatgtgc tggatgaatg accgaatata agggagcccc tgcggatgga 720

113

cctcgtgac ctgctgacac agaatccgga gctgttcaga aagaatgccg aagagttcac 780
 cctccgattc ggagtggaacc ggccctccta actcatgttc tgacctctg tgcactggat 840
 cctcggcata gcggacggac acacctcatg gactgaggcc agagccccct gtggccatt 900
 cccattcat tttcccttc ttaggtgtt agtcattagt ttgtgtgtgt gtgtggtgga 960
 gggaaaggag ctatgagtgt gtgtgtgtg tatggactca ctcccagggt cacctggcca 1020
 cagggtgcacc cttccacac cctttacatt cccagagcc aaggagttt aagtttgag 1080
 ttacaggcca gttctccagc tctcatctt agagagacag gtcacctgc aggcctgctt 1140
 gcaggaaatg aatccagcag ccaactcgaa tccccctagg gctcaggcac tgagggcctg 1200
 gggacagtgg agcatatggg tgggagacag atggagggtta ccctatttac aactgagtca 1260
 gccaaagccac tgatgggaat atacagattt aggtgctaaa cgtttattt tccacggatg 1320
 agtcacaatc tgaagaatca aacttccatc ctgaaaatct atatgtttca aaaccacttg 1380
 ccactctgtt agattgccag ttcctgggac caggcctcag actgtgaagt atatatctc 1440
 cagcattcag tccaggggga gccacggaaa ccattgtctt gcttaagcca ttaaagtcag 1500
 agatgaa 1507

<210> 69
 <211> 1279
 <212> DNA
 <213> Homo sapien

<400> 69
 cagcggccgg ccgcggggccc tttttgtcct gagggccaga gaaatggaga aggggggtggg 60
 gggacagcca cgtggccgca ggaggattta caacattttc tttcgccatc gatgttatcg 120
 caaaatgtgt gagagaagcg gctgcgcagc ccggacggga gcgtgagggt gcgggccagg 180
 taagcagccc cggcggtttc gccgcatacg ggactgcggg gcgaccgagg gcaccagcca 240
 cgcgcagcgg ctccgcgggg tctcggcggg gtccgcgctc tgaaggatct cgagagccat 300
 ggatggtgca ggcgggaccc tcgagctgca gcatctccgg tgaccggggg ttgccgagga 360
 ggtggagacc agcacagggt gtccggcccc ggccctccg aatccggggg tggtaagac 420
 ggatcccaaa ggctgaggtc ggcagtccc gggactcgca gctgttgagc ctgtggagac 480
 gcggccccgt gaccgaggca cccttcagca acccgggggc agcgttccag agactgaact 540
 tctcaaatca ctgcttcaac agcttttaaa aatctggacc tagttactcc tgtcatctat 600
 gtgtaaagat ttagaaaaaa aatcccaaac ccaagggtgg gcagccgca ggatgtacag 660
 ctctggcag tgtgcgtca cccggagacc tgaggtaaaa gcccaaatgc tgagcacctc 720
 ctgggaggcg ggagcatggt ctgctcagtg ccagacatct ggatattgag aaaacatctg 760

114

```

.ggtagctggg gttttcaggt ttctgcctga catttaatat cacaaacatt gagcctgctc      840
ctgtcccca ccagccacgc ggcttctcct cccaaacata ccagctcct tcccctgcct      900
tcttgacggg taagaaacat ccattcttct caattcccca gcgttttccc cctaccggaa      960
atctgatggg cttatgacat catggctggc tgctgagcga tgaagtggat gccacaaaga     1020
aatccgacat atcagataga ttctgaaatc ggtttccctc cagctgtagt aacaggcgtg     1080
aagtcaggag aatttgagct ttgtttaaaa aataaataaa taaataaata aaccataaca     1140
aagtcttgcc ctgtattaaa tgcaattttc ttaaaaacaa gcaaaccctt tggacatcat     1200
tttattttta tagaaatgct gagttttatg aaactaaagt ggctaataaa tcagacctga     1260
agctttgtgt gagtgttcc                                     1279

```

<210> 70
 <211> 517
 <212> DNA
 <213> Homo sapien

```

<400> 70
cagcggccgg ccgcggggcc tttttgtcct gagggccaga gaaatggaga agggggtggg      60
gggacagcca cgtggccgca ggaggattta caacattttc tttcgccatc gatgttatcg     120
caaaatgtgt gagagaagcg gctgcgcagc cccgacggga gcgtgagggg gcgggcccagc     180
gttttcccc taccggaaat ctgatgggct tatgacatca tggctggctg ctgagcgatg     240
aagtggatgc cacaaagaaa tccgacatat cagatagatt ctgaaatcgg tttccctcca     300
gctgtagtaa caggcgtgaa gtcaggagaa tttgagcttt gtttaaaaaa taaataaata     360
aataaataaa ccataacaaa gtcttgccct gtattaaatg caattttctt aaaaacaagc     420
aaaccttttg gacatcattt tattttaata gaaatgctga gttttatgaa actaaagtgg     480
ctaataaatc agacctgaag ctttgcgtga gtgttcc                                     517

```

<210> 71
 <211> 736
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (46)..(46)
 <223> n=a, c, g or t

```

<400> 71
gtccccaaa gggtaacctgc ttctgctggc ttaatgcctc agaacnttgg tgtcattggg      60
ctcagacacc actttgccat ccactatccg gcgggtgggt gtctttggga tggtttgcac     120

```

115

ggagttgctg ctgtccaagg catcaccaag attaaagtcc tcgccatcta cagcttctgc 180
 tcccagatct gtgacccccg gacgaccggc gcgttctggc agacgtggaa ggactttgag 240
 gtccggcatg gcaatgagga caccatcaag gaaatgctgc gtatccggcg cagcgtgcag 300
 gccacgtaca acacgcaggt caacttcatt gcctcgcaga tgctcaaggt ctccggcagt 360
 gccacgggca ccgtgtctga cctggcccct gggcagagt gcatggacga catgaagctg 420
 ctggaacagc gggcagagca gctggcggct gaggcggagc gtgaccagcc cttgcgcgcc 480
 cagagcaaga tcctgttcgt gaggagtgc gcctcccggg aggagctggc agagctggca 540
 cagcaggtca accccgagga gatccagctg ggcgaggacg aggacgagga cgagatggac 600
 ctggagccca acgaggttcg gctggagcag cagagcgtgc cagccgcagt gtttgggagc 660
 ctgaaggaag actgaccogt ccctccccc tccccctcc ccacccctc cccaatacag 720
 ctacgtttgt acatca 736

<210> 72
 <211> 3041
 <212> DNA
 <213> Homo sapien

<400> 72
 aatgatagat cactataggg gaatgggtcc tctaattgctg ctcgagcggc gcagtgtgat 60
 ggatcgtggt cgcggcgagg taccagtatt ctccacagaa ccagcatgta gagcagcagc 120
 cacactacac ccacaaacca actctggaat acagtccctt tcccatacct cccagctccc 180
 ccgcttatga accaaacctc tttgatggtc cagaatcaca gttttgcca aaccaaagct 240
 tagtttccct tcttggtgat caaagggaat ctgagaatat tgctaattcc atgcagactt 300
 cctccagtgt tcagcagcaa aatgatgctc acttgacag cttcagcatg atgccagca 360
 gcgcctgtga ggccatggtg gggcacgaga tggcctctga ctcttcaaac acttcactgc 420
 cattctcaaa catgggaaat ccaatgaaca ccacacagtt agggaaatca ctttttcagt 480
 ggcaggtgga gcaggaagaa agcaaattgg caaatatttc ccaagaccag tttctttcaa 540
 aggatgcaga tggtagacag ttccttcata ttgctgttgc ccaagggaga agggcacttt 600
 cctatgttct tgcaagaaag atgaatgcac ttcacatgct ggatattaaa gagcacaatg 660
 gacagagtgc ctttcagggt gcagtggctg ccaatcagca tctcattgtg caggatctgg 720
 tgaacatcgg ggcacaggtg aacaccacag actgctgggg aagaacacct ctgcatgtgt 780
 gtgctgagaa gggccactcc caggtgcttc aggcgattca gaaggagca gtgggaagta 840
 atcagtttgt ggatcttgag gcaactaact atgatggcct gactcccctt cactgtgcag 900
 tcatagccca caatgctgtg gtccatgaac tccagagaaa tcaacagcct cattcacctg 960

116

aagttcagga gcttttactg aagaataaga gtctgggtga taccattaag tgcctaattc 1020
aaatgggagc agcgggtggaa gcgaaggatc gcaaaagtgg ccgcacagcc ctgcatttgg 1080
cagctgaaga agcaaactctg gaactcattc gcctcttttt ggagctgccc agttgcctgt 1140
cttttgtgaa tgcaaaggct tacaatggca aacttgccct ccatgttgct gccagcctgc 1200
agtatcggtt gacacaatta gatgctgtcc gcctgttgat gaggaaggga gcagacccaa 1260
gtactcggaa cttggagaac gaacagccag tgcatttggc tcccgatggc cctgtgggag 1320
aacagatccg acgtatcctg aagggaaagt ccattcagca gagagctcca ccgtatttagc 1380
tccattagct tggagcctgg ctagcaaac tctactgtcag ttaggcagtc ctgatgtatc 1440
tgtacataga ccatttgcct tatattggca aatgtaagtt gtttctatga aacaaacata 1500
tttagttcac tattatatag tgggttatat taaaagaaaa gaagaaaaat atctaatttc 1560
tcttggcaga ttgcatatt tcataccag gtatctggga tctagacatc tgaatttgat 1620
ctcaatggta acattgcctt caattaacag tagcttttga gtaggaaagg actttgatct 1680
gtggcacaaa acattattaa tatagctatt gacagtttca aagcaggtaa attgtaaatg 1740
tttctttaag aaaaagcatg tgaaaggaaa aaggtaaata cagcattgag gcttcatttg 1800
gccttagtcc ctgggagtta ctggcggttg acaggcttca gtcattggac tagatgaaag 1860
gtgtccatgg ttagaatttg atctttgcaa actgtatata attgttatct ttgtccctaa 1920
aaatattgta catacttggc tggttaacatg gtcataattg aaatgtataa gtccataaaa 1980
tagaaaagaa caagtgaatt gttgctatct aaaaaaatct tacaattctt actaaggagt 2040
ttttattgtg taatcactaa gtctttgtag ataaagcaga tggggagtta cggagtgtgt 2100
cctttactgg ctgaaagata tattcgaatt gtaaagatgc tttttctcat gcattgaaat 2160
tatacattat ttgtagggaa ttgcatgctt tttttttttt ttctcccgag acagggtctt 2220
gctctggcgc ccaggctgga gtacagtggc atgatcttgg ctcaactcag ccttgacttg 2280
ggctcaagtg atcctcctac ctgagccttc tgagtaactg ggactacagg tgtgactcc 2340
tcgcctggct aattttttat tttttgtaca ggcaggatct tgccaccttg ccaggctgg 2400
tcttgaactc ctgagctcat gccatctgcc tgccttagtc tcccaaatg ctgggattac 2460
aggagtgagc caccatgccc ggctggcagt tgcattggaag agaacacctc tttatggctt 2520
accctctaga attttctaatt tatgtgttct gttgaaattt ttgttttttt acccttattg 2580
aaacaacaaa aagtcagtat tgaaacatat ctctctgttt tctgttgtca aatgatgata 2640
atgtgccatg atgttttata tatatcattc agaaaaagt ttatttttta ataacattct 2700
attaacatta ttttgcctgc cgctggcatg cctgaggaat gtatttggct ttgattacac 2760
actaagtttt tgtaataaat ttgactcatt aaaaaccttt tttttttaa aaaaaaaaaa 2820

117

agaaaatctc attagtgaac ttatctttgc agctgagtac tttaaattctt tttaaaaaga 2880
 tacccttttg attgatcaca ttgtttgacc cagtatgtct tgtagacacg ttagttataa 2940
 tcaccttgta tctctaaata tgggtgtgata tgaaccagtc cattcacatt ggaaaaactg 3000
 atggttttaa ataaactaat tcactaatat tatttgtctt a 3041

<210> 73
 <211> 1193
 <212> DNA
 <213> Homo sapien

<400> 73
 acatccagct gcctgagacc ctctgcagc cttctcaagg gacagcccca ctctgcctct 60
 tgctcctcca gggcagcacc atgcagcccc tgtggctctg ctgggcactc tgggtgttgc 120
 ccttgccag cccggggcc gccctgaccg gggagcagct cctgggcagc ctgctgcggc 180
 agctgcagct caaagaggtg cccaccctgg acagggccga catggaggag ctggtcatcc 240
 ccaccacgt gagggcccag tacgtggccc tgctgcagcg cagccacggg gaccgctccc 300
 gcgaaaagag gttcagccag agcttccgag aggtggccgg caggttctct gcgttgagg 360
 ccagcacaca cctgctggtg ttccgcatgg agcagcggct gccgccaac agcgagctgg 420
 tgcaggccgt gctgcggctc ttccaggaat gtacattgac ctgcagggga tgaagtgggc 480
 cgagaactgg gtgctggagc cccgggctt cctggcttat gagtgtgtgg gcacctgccg 540
 gcagcccccg gagggccttg ccttcaagtg gccgtttctg gggcctcgac agtgcacgc 600
 ctgggagact gactcgtgc ccatgatcgt cagcatcaag gaggaggcca ggaccaggcc 660
 ccagggtggtc agcctgcca acatgagggg gcagaagtgc agctgtgcct cggatggtgc 720
 gctcgtgcca aggaggctcc agccataggc gcctagtgtg gccatcgagg gacttgactt 780
 gtgtgtgttt ctgaagtgtt cgagggtacc aggagagctg gcgatgactg aactgctgat 840
 ggacaaatgc tctgtgctct ctagttagcc ctgaatttgc ttcctctgac aagtacctc 900
 acctaat tttt tgcttctcag gaatgagaat ctttggccac tggagagccc ttgctcagtt 960
 ttctctattc ttattattca ctgcactata ttctaagcac ttacatgtgg agatactgta 1020
 acctgagggc agaaagccca atgtgtcatt gtttacttgt cctgtcactg gatctgggct 1080
 aaagtcctcc accaccactc tggacctaag acctgggggt aagtgtgggt tgtgcatccc 1140
 caatccagat aataaagact ttgtaaaaca tgaataaaac acattttatt cta 1193

<210> 74
 <211> 1725
 <212> DNA
 <213> Homo sapien

<400> 74
 tttttttttca cctaaattgt ttttacttgc ttcaccttaa atcagttatt cggttcccttt 60
 gaagaacatg tagcttttagc aacccccaaa gtgaaccagc ataccagaa ctactgattg 120
 ttacatcaga gtttttgaaa acgccaatac tggaaacagg ccgacagtta aggagaggca 180
 ggcctcaaac taaagcagaa ccttctcaaa actacttata tttcaagaga tggattaagc 240
 gaaaagagct gtacaaagaa ataagccatt ttctatgcgc ctgttatatg caaggcactg 300
 cactcccttg tcacttgta atttacaaga agactcgccg gtccagggaa gggagagggg 360
 aatagggtgca aggtttgtgg agggcggcaa actgcactcc atgtggcgcg aggctgcgc 420
 tgcggagatc cgggttctgg tgcttgccgc cggcagccag tagggcgcg cgtcctgcgc 480
 agttgcccgc cgcggcctcc tcgggcttca ggccgggcca atcaggaggc gggcgggagg 540
 gggcgcggtta ccaggagsga acgggacggg tcgggcttcg aggtcagctg gtccgcaggg 600
 aagcctttgg cttccccacc ggcaatggag cgggtgacgt tgctctcgg cggcgcgcg 660
 gcggtggacg agtacctgga gtaccggagg tataaacaac ataaaactga cttggaagcg 720
 attcctcagc agtgcccat tgatctgcc tgccaagtga ctggctgcca gtgcagggt 780
 tacctttatg tccccttgaa tggtagccag ccattcgtc gcaggtgcaa acactttgct 840
 gatcagcaca gtgctgcgc tggttttaca tgcaatacat gttccaagt ttcaggattc 900
 catagctgct tcacttgtc ttgtggtcag cctgcatatg cccatgacac agtagtggaa 960
 actaagcaag aaagattggc tcaggaaaaa ccagtgggac aggacattcc ttatgcagcc 1020
 atgggaggat taactggttt cagctcgctg gcggaaggct acatgcggtt agatgacagt 1080
 gggattgtag gtacaagtag tcaagtttct tcattaagga gacctgaaga ggatgatatg 1140
 gctttctttg aaagacgata ccaggaaagg atgaaaatgg aaaaggctgc taagtggaaa 1200
 ggaaaagctc cattgccatc agctacaaaa ccttcatgaa gactattgga gaaattaaaa 1260
 ccatcatcca agtatctttt tcatgtttat ttaaattgaa taatacagtt cttttttcct 1320
 gaaattatct actttttttt tttactgtat aaatgtcttt tgggatgttt ccttaattta 1380
 tttaaataac taaaaatgtc tattactttt gtcaaaactc ataatttact actttgtatg 1440
 tacctttctt tctcctgaca aatgagggtta ttttatatga gtctgtctga gactacagta 1500
 aatgttttta gtacataata atttaactgt ttcagggtatt taaaaatta aagatattat 1560
 caagggtttt ggacaaacat atgagccatt tttttgtcat tcaaatagt aagttaaaaa 1620
 caagagaaca aaagaaaaaa atagttaaaa tcattaattt ttttattttt caaactttgt 1680
 aatgttatgt tttcaaataa aaactatctc aaaattttac aacca 1725

119

<210> 75
 <211> 670
 <212> DNA
 <213> Homo sapien

<400> 75
 ggagggttcag gaagccatTT tcttttcgcgt ctgcggtgct cggagtgtgg tactttctcct 60
 agttgcagtc aggcttcata cgctattgtc ctgcccgtta gagcagccag cgggtacaga 120
 atggatTTtg gaagagggag tcaccactgg acctccaagg aagccacgtg cagacatcta 180
 caaccttcga tctcctgacg agtttattgt tggccaaaac caggctttga ttgaaccagg 240
 atgaatgcgg gtgttggaag tagaatatat atatacatat aaaattggtt gggagccacg 300
 tgtaccagtg tgtgttgatc ttggcttgat tcagtctgcc ttgtaacaga aactggcgat 360
 ggaatatgag aggagccctc tggaagaaa aggacagacc ctgtgctttc atgaaagtga 420
 agatctggct gaaccagttc cacaaggtta ctgtatacat agcctgagtt taaaaggctg 480
 tgcccacttc aagaatgtca ttgttagact ttgaaatttc taactgccta cctgcataaa 540
 gaaaataaaa tcttttaaat caaaaaaaaa aaaaaaaca aaaaacttgt ggtggggggc 600
 cttgggcccc ggaaaagggt ttttaacctt tccgttgggg gggggggggc ccttggtttg 660
 cggccccctg 670

<210> 76
 <211> 964
 <212> DNA
 <213> Homo sapien

<400> 76
 ggagggttcag gaagccatTT tcttttcgcgt ctgcggtgct cggagtgtgg tactttctcct 60
 agttgcagtc aggcttcata cgctattgtc ctgcccgtta gagcagccag cgggtacaga 120
 atggatTTtg gaagagggag tcaccactgg acctccaagg aagccacgtg cagacatcta 180
 caaccttcga tctcctgacg agtttattgt tggccaaaac caggctttga ttgaaccagg 240
 atgaatgcgg gtgttggaag tagaatatat atatacatat aaaattgaaa ctggcgatgg 300
 aatatgagag gagccctctg gaaagaaaag gacagacctt gtgctttcat gaaagtgaag 360
 atctggctga accagttcca caaggttact gtatacatag cctgagttta aaaggctgtg 420
 cccacttcaa gaatgtcatt gttagacttt gaaatttcta actgcctacc tgcataaaga 480
 aaataaaatc ttttaaatca aaaaaaaaaa aaaggggggg cgcacctttt tttttttttt 540
 tttgggaggt cccaacaat tcttgggtta ttctttcccc aaaaggtaaa tatacccgaa 600
 gggtttttaa agttccacaa aaaaaacctt atttgggttc cttccccaaa gaaaaaaaaa 660
 atacatgaga gcaacagccc agcccgatag acagcacaga gacaactcgc aaccaacaag 720

120

tccgcccac gacaagcaga aacaaaagga gggcggcgag ccaacacatc agcaaggcga	780
caagaccac agccaagagg caggcgccg acagtgcacat aacaacgagc ggccccacgg	840
caacgacaac cgacgataag aacgacgtgt gtgaagacac accccaccgc cgaacgacgg	900
gatggcacca gcgagaccta tagtacgcga agcagccaag acgaagagcg gggaaagcaag	960
gaaa	964

<210> 77
 <211> 269
 <212> DNA
 <213> Homo sapien

<400> 77	
cctctctggc ggcggctgct gctagggagt cgacttctcc tgccttgtaa cagaaactgg	60
cgatggaata tgagaggagc cctctggaaa gaaaaggaca gaccctgtgc tttcatgaaa	120
gtgaagatct ggctgaacca gttccacaag gttactgtat acatagcctg agttttaaag	180
gctgtgccca cttcaagaat gtcattgtta gactttgaaa tttctaactg cctacctgca	240
taaagaaaat aaaatctttt aaatcaaaa	269

<210> 78
 <211> 928
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (855)..(855)
 <223> n=a, c, g or t

<400> 78	
ggagggttcag gaagccatct tctttcgct ctgcggtgct cggagtgtgg tacttctcct	60
agttgcagtc aggcttcata cgctattgtc ctgccggtta gagcagccag cgggtacaga	120
atggattttg gaagaggag tcaccactgg acctccaagg aagccacgtg cagacatcta	180
caaccttcga tctctgacg agtttattgt tggccaaaac caggcttga ttgaaccagg	240
atgaatgcgg gtgttggaag tagaatatat atatacatat aaaattgggtt gggagccacg	300
tgtaccagtg tgtgttgatc ttggcttgat tcagtctgcc ttgtaacaga aactggcgat	360
ggaatatgag aggagccctc tggaaagaaa aggacagacc ctgtgctttc atgaaagtga	420
agatctggct gaaccagttc cacaaggtta ctgtatacat agcctgagtt taaaaggctg	480
tgccacttc aagaatgtca ttgtagact ttgaaatttc taactgccta cctgcataaa	540
gaaaaataaaa tcttttaaat caaaaaaaaa aacaaaaaa aatatctata aacacaaaga	600
aaaacaaatt caaacttaca cattatccaa tcattctatt attataaata tatgaaaaa	660

121

aaaaaaactt gggggcccg c ttggcccagg ggggttttaaa tctggaccaa tttattcctg 720
 gggcccaatt tggggctcat tttggccaat tgccccttta ggggaggcgt ttacaattca 780
 tgggcccgggt tttcaaacgg tggatatttg aaaaccctg gggttacca atttttaaac 840
 ccttgggaaa aaatnccctt ttttcacagt ggggggaaat tccgaaggcc ccgcccctg 900
 aggccttttc catttgcccc ctcttttg 928

<210> 79
 <211> 2448
 <212> DNA
 <213> Homo sapien

<400> 79
 tttttttttt tcactagtag cattgttaat attaaacaag atagctaata gctttaaagc 60
 gtctaatacac ggtaccccca cgagtagtag tcacacagca aatcataggc aggagtggac 120
 aaacagcgct gggagcatta attctggtag atttgagtc tgggcagggc ctaagaggat 180
 gggatcagcg gattgggcca gccaaagggg gcgggttcag agggaggagc cagctgcctc 240
 ccgctgcaag ccccgagctt tgaatcaagc gcggtagttt cagctgtagc caatcctaga 300
 aaaaaatctt tttgcgtcag ttgttgctga ggcctagatc tcaccagat cagttctagt 360
 cgctgctgct tgtaccgctc ctgggccctt gcgtgtccgt ccgttacgac tcagaggacg 420
 gagagaaagt ctaagtcacc ttccctcagta tccaggccgg aaggagactc tcagctactc 480
 gccctgaaca tgcagagcag cactggcttc cctgtctctg gatgccgcag gggcgtcctg 540
 tcaggagtgt tagtgtcaag attccagttc ttcttatgct acttgctgga gaagcaggaa 600
 gttgctgttt attggagaag tcgggctagg gagggaaaca atcccgcgga gccatatgga 660
 gagggcagga ggtgtctaga tagtggtagg ccggcggggg acggagggta tgggtggtga 720
 gtcctggccc tttaaacccg agggggagga tccggaagtg gatgggcggg gcgaagggtc 780
 ctgctatata aaagggcccc ggccgcgcgg ggtctctaat ctgccatttt ctgtccctga 840
 gtgagtctct ggcgteccaa attgcctgtt tttctcgcag gctctattcc gttcgctggt 900
 tcgccacctc aggggaacga tggccatgga gtccacagcc actgccgcgg tcgccgcgga 960
 gctggtttct gccgacaaaa ttgaagatgt tcctgctcct tctacatctg cagataaagt 1020
 ggagagcaac cattaatctg cttctctgtca ctgaagatgg gttgcatttt gtagaatatt 1080
 atctaaatag aatcatacat ctggatgtgg atagtgaagc taagaaacta ttgggttttag 1140
 gacagaaaca tctgggtgatg ggggatattc cagcagctgt caatgcattc caggaagcag 1200
 ctagtctttt aggtagaag tatggagaga cagctaata gtgtggagaa gccttctttt 1260
 tctatgggaa atcacttctg gagttggcaa gaatggagaa tgggtgtgtg ggaaacgcct 1320

122

tggaaaggtgt gcatgtggaa gaggaagaag gagaaaaaac agaagatgaa tctctggtag 1380
 aaaataatga taacatagat gaaactgaag gctcgggaaga ggatgataaa gaaaatgata 1440
 agactgaaga aatgccaaat gattcagtcg ttgaaaacaa gtctcttcaa gaaaatgagg 1500
 aggaggagat tgggaacctg gagcttgccg gggatatgct ggatttagca aagatcattt 1560
 ttaaaaggca agaaacaaaa gaagcacagc tttatgctgc ccaggcacat cttaaactcg 1620
 gagaagttag tgttgaatct gaaaactatg tgcaagctgt ggaggagtgc cagtcctgcc 1680
 ttaacctgca ggaacagtac ctggaagccc acgaccgtct ccttgacagag acccactacc 1740
 agctgggctt ggcttatggg tacaactctc agtatgatga ggcagtggca cagttcagca 1800
 aatctattga agtcattgag aacagaatgg ctgtactaaa cgagcaggcg aaggaggctg 1860
 aaggatcgtc tgctgaatac aagaaagaaa ttgaggaact aaaggaactg ctaccgaaa 1920
 ttagagagaa gatagaagat gcaaaggagt ctcagcgtag tgggaatgta gctgaactgg 1980
 ctctgaaagc tactctggcg gagagttcta cttcaggttt cactcctggg ggaggaggct 2040
 cttcagtcct catgattgcc agtagaaagc caacagacgg tgcttctca tcaaattgtg 2100
 tgactgatat tccccacctt gtcagaaaga agaggaaacc agaggaagag agtccccgga 2160
 aagatgatgc aaagaaagcc aaacaagagc cggagggtgaa cggaggcagc ggggatgctg 2220
 tccccagtgg aaatgaagtt tcggaaaaca tggaggagga ggctgagaat caggctgaaa 2280
 gccgggcagc agtggaggcg acagtggagg ctggagctac agttgaaagc actgcatgtt 2340
 aagagggggc acagccctcc tccaaggga aagtgttttt gtatataatg tattttttca 2400
 cttttggagg attctttttg tataacttca ataaagattg taagcaaa 2448

<210> 80

<211> 1648

<212> DNA

<213> Homo sapien

<400> 80

tgacgcgaat gacgctgcgc cagtcaggcc gcagccccgc tgcttgcccc gtcgggcccc 60
 ccttgggccg ctcggccccg ccccgccct cctgcacgg cctcccgctg gcccctgtca 120
 gactgtggcg gccggctcg cggtgcgctc tccctccctg cccgcagcct ggagaggcgc 180
 ttcgtgctgc acacccccgc gttcctgcgc gcaccgcgc tgccctctgc cgcgctccgc 240
 cctgccgcgc accgcacgcc cgccgcggga catggcacac gcaccggcac gctgccccag 300
 cgcccggggc tccggggacg gcgagatggg caagcccagg aacgtggcgc tcatcaccgg 360
 tatcacaggc caggatgggt cctacctggc tgagttcctg ctggagaaag gctatgaggt 420
 ccatggaatt gtacggcggt ccagttcatt taatacgggt cgaattgagc atctgtataa 480

123

gaatccccag gctcacattg aaggaaacat gaagttgcac tatggcgatc tcaactgacag 540
 tacctgcctt gtgaagatca ttaatgaagt aaagcccaca gagatctaca accttggagc 600
 ccagagccac gtcaaaattt cctttgacct cgctgagtac actgcggaagc ttgacggagt 660
 tggcactcta cgacttctag atgcagttaa gacttgtggc cttatcaact ctgtgaagtt 720
 ctaccaagcc tcaacaagtg aactttatgg gaaagtgcag gaaatacccc agaaggagac 780
 cacccttttc tatccccggc caccctatgg agctaatttc gttactcgaa aaattagccg 840
 gtcagtagct aagatttacc ttggacaact ggaatgtttc agtttgggaa atctggatgc 900
 caaacgagat tggggccatg ccaaggacta tgtggaggct atgtggttga tgttgcagaa 960
 tgatgagccg gaggacttcg ttatagctac tggggaggtc catagtgtcc gggaatttgt 1020
 cgagaaatca ttcttgaca ttggaaaaac cattgtgtgg gaaggaaaga atgaaaatga 1080
 agtgggcaga tgtaaagaga ccggcaaagt tcacgtgact gtggatctca agtactaccg 1140
 gccaaactgaa gtggactttc tgcaggcgga ctgcaccaa gcgaaacaga agctgaactg 1200
 gaagccccgg gtcgctttcg atgagctggt gagggagatg gtgcacgccc acgtggagct 1260
 catgaggaca aaccccaatg cctgagcagc gcctcggagc ccggccccgc ctccggctac 1320
 aatccccgca gagtctccgg tgcagacgcg ctgcggggat ggggagcggc gtgccaatct 1380
 gggggtcccc tgcggccctt gctgcgctg cgctgtcccc gccgcaagag cggggcccgcc 1440
 ccgcccaggt ttgtagcagc cgggatgtga cctccaggg tttgggtcgc tttgcgtttg 1500
 tgaagcctc ctctgaatgg ctttgtgaaa tcaagatgtt ttaatcacat tcaactttact 1560
 tgaaattatg ttgttacaca acaaattgtg gggccttcaa attgtttttc tcttttcata 1620
 ttaaaaatgg tctttctgtg aactagca 1648

<210> 81
 <211> 2595
 <212> DNA
 <213> Homo sapien

<400> 81
 tgacgcgaat gacgtgcgc cagtcaggcc gcagccccgc tgcttggccc gtcgggccc 60
 ccttggccgg ctcgccccgc ccccgccct cctgcacgg cctcccgctg gccctgtca 120
 gactgtggcg gccggtcgag cgggtgcgtc tccctccctg ccgcgagcct ggagaggcgc 180
 ttctgtctgc acacccccgc gttcctgcgc gcaccgcgcc tgccctctgc cgcgctccgc 240
 cctgccgccc accgcacgcc cgcgcggga catggcacac gcaccggcac gctgccccag 300
 cggccggggc tccggggagc gcgagatggg caagcccagg aacgtggcgc tcatcaccgg 360
 tatcacaggc caggatggtt cctacctggc tgagttcctg ctggagaaag gctatgaggt 420

ccatggaatt gtacggcgggt ccagttcatt taatacgggt cgaattgagc atctgtataa 480
 gaatccccag gctcacattg aaggaaacat gaagttgcac tatggcgatc tcaactgacag 540
 tacctgcctt gtgaagatca ttaatgaagt aaagcccaca gagatctaca accttgagc 600
 ccagagccac gtcaaaattt cctttgacct cgctgagtac actgaggacg ttgacggagt 660
 tggcactcta cgacttctag atgcagttaa gacttgtggc cttatcaact ctgtgaagtt 720
 ctaccaagcc tcaacaagtg aactttatgg gaaagtgcag gaaatacccc agaaggagac 780
 cacccttttc tatccccgggt caccctatgg ggcagcaaaa ctctatgcct attggattgt 840
 ggtgaacttc cgtgaggcgt ataatctctt tgcagtgaac ggcattctct tcaatcatga 900
 gagtcccaga agaggagcta atttcgttac tcgaaaaatt agccggtcag tagctaagat 960
 ttaccttggg caactggaat gtttcagttt gggaaatctg gatgccaac gagattgggg 1020
 ccatgccaaag gactatgtgg aggctatgtg gttgatgttg cagaatgatg agccggagga 1080
 cttcgttata gctactgggg aggtccatag tgtccgggaa tttgtcgaga aatcattctt 1140
 gcacattgga aaaaccattg tgtgggaagg aaagaatgaa aatgaagtgg gcagatgtaa 1200
 agagaccggc aaagtccacg tgactgtgga tctcaagtac taccggccaa ctgaagtgga 1260
 gaccaattaa ttgttcaaag gtaatatata gagatctcaa gagcatttac tttggcacag 1320
 tctctgcccc tttgtggtct ggctaacaat aaagctaaga tttgttttgt aatgacgggt 1380
 ccagttggac tgggaattcct ttgaagttcc tgaagtttgc tgttgtgaga gctcaagata 1440
 ttatttgact gcaatgaaac actctctgtg tattatcaaa atatcgata cactgaactg 1500
 taacaacttg cagtaatcag acttctcctt cgagggtggc tgcgtgagta gagagcatcc 1560
 acagagagat gagcttctcc caacatccat ttagtgttca gtcattcacg gccactcatg 1620
 gatctgaacc ttcttacaag gtcgatacca acaggatga ggagcagaga gcagatcagc 1680
 acggagcagc attagctggg gcctccttgc ctggcctggc agtgaagata gagcaccatg 1740
 ccagttgttc agcttctcag cgcttgcatc agctgacctt aattatttaa ggatgtgtgc 1800
 acctctaaat aaatatagtc attgtcctgg tctctattta tattttaaaa ctctttccca 1860
 gccacccccg atggcctaaa acaattcata tacttcagta gaagagggtg tcacagggct 1920
 atttgacag gtttggatcc agtgccagcg ttagccttca cacaagttac actcctctga 1980
 gatgtaactg tctcctgtgt atgagtgcc aagtatttga taaccgcat ctgtctgttc 2040
 tcaacacagg tttcacaagc acagtgatgt cttccattgt gtgcgtaaca actgtgtgtg 2100
 tgaggagaga gaggactctg tacgcatgca catgtttgga gctacataaa tctgagaagc 2160
 agttttgtct agtgcgtttt cagtaaatgg gactcattta gtcagtttgc tttgctgtca 2220

125

gaatcatatt ccagatatca gaatgtgcta tggcaggtac ttgtttraaa caagtaataa 2280
 tatccttgta atgttttagca atacagctga ctggtctgtg ttccattact tgtgtaaaag 2340
 gaaatatgta aagcttttaa aaataagttt aaatgatcaa aagagatgcc tgaaaatata 2400
 ttttggcaca ggaaattaca ggaatttata aatgtgtcat gtggaaagat aattacaaag 2460
 tttattttaa tcttttatct ctgactgaat cttaagttaa aatattcttc ccggcatcct 2520
 gtctggtttt tgccaactgtc cctgctttac gtgttacctt tccatgttga tctgagttgc 2580
 atttagttga ggaga 2595

<210> 82
 <211> 1706
 <212> DNA
 <213> Homo sapien

<400> 82
 tgacgcgaat gacgctgcgc cagtcaggcc gcagccccgc tgcttggccc gtcgggcccc 60
 ccttggcccg ctcggccccgc ccccgccct ccttcacgg cctcccgtc gccctgtca 120
 gactgtggcg gccggtcgcy cgggtgcgctc tccctccctg ccgcagcct ggagaggcgc 180
 ttogtgctgc acacccccgc gttcctgcy gcaccgcgc tgccctctgc cgcgctccgc 240
 cctgccgcy accgcacgc cgcgcggga catggcacac gcaccggcac gctgccccag 300
 cgcgcgggc tccggggagc gcgagatgg caagcccagg aacgtggcgc tcatcaccgg 360
 tatcacaggc caggatggt cctacctggc tgagttcctg ctggagaaaag gctatgaggt 420
 ccatggaatt gtacggcgt ccagttcatt taatacgggt cgaattgagc atctgtataa 480
 gaatccccag gctcacattg aaggaaacat gaagttgcac tatggcgatc tcaactgacag 540
 tacctgcctt gtgaagatca ttaatgaagt aaagcccaca gagatctaca accttggagc 600
 ccagagccac gtcaaaattt cctttgacct cgctgagtac actgcggagc ttgacggagt 660
 tggcactcta cgacttctag atgcagttaa gacttgtggc cttatcaact ctgtgaagtt 720
 ctaccaagcc tcaacaagt aactttatgg gaaagtgcag gaaatacccc agaaggagac 780
 caccctttc tatccccggt caccctatgg ggcagcaaaa ctctatgcct attggattgt 840
 ggtgaacttc cgtgaggcgt ataactctt tgcaagtgaac ggcattctct tcaatcatga 900
 ggtcccaga agaggagcta atttcggtac tcgaaaaatt agccggtcag tagctaagat 960
 ttaccttga caactggaat gtttcagttt gggaaatctg gatgccaac gagattgggg 1020
 ccatgccaag gactatgtgg aggtatgtg gttgatgtt. cagaatgatg agccggagga 1080
 cttcggtata gctactgggg aggtccatag tgtccgggaa tttgtcgaga aatcattctt 1140
 gcacattgga aaaaccattg tgtgggaagg aaagaatgaa aatgaagtgg gcagatgtaa 1200

126

agagaccggc aaagtccacg tgactgtgga tctcaagtac taccggccaa ctgaagtggc 1260
 aaggactctc tggccaccca gtgctgggcc acgtttggct ggctggctgg gcaaatgcgc 1320
 tcatggaatg cctggtgcca gcctttggag ctgtcagttc agctccctgg catccttcag 1380
 cgtgcatttc caaaatcaga acacagtga ttcaatttga gattatcatt cttaccacaa 1440
 acttcattgc tctataaagg aaaacaagag ttaaaccac caaaagaaat cattgatttc 1500
 agaaatggaa tctcacatca cagcagatc tctcatgtt ggtctcctat tctaattggc 1560
 ggtccctgat aacctacagg atgcctgact taacaacgct gtcccagacc tgcaggacat 1620
 ctaggtcctc tccagctatg tctatgtctg tgtctgtgta ctcatacaca gtgcatactt 1680
 gcacactata ccataaatgg tctccc 1706

<210> 83

<211> 2567

<212> DNA

<213> Homo sapien

<400> 83

ttgggttttt tttttttttt gcttttttgt tttttgagac agggctcttg tctgttgccc 60
 aggtctgggt gcagtggcga gatctcagtt cactgcaacc tccacatccc ggctttaacc 120
 gattctccca tctcagcctc acgagtagct gggattacag ggctgcatca acacacctgg 180
 ctaatttttg tatttttagt acagatgggg tttcaccatg ttggccaggc tggctctaaa 240
 ctctgacct caggtgatct gccagcttca gcttccaaa gtgctgggat tacaggcgtg 300
 agctaccacg cctggccttg gccatgtaga tttctttcac accttcctta ttccttcttc 360
 agaagctgag gcccatgag gggaaagctgg tagccagggg tcttttcagg tacctgtggc 420
 caaattaggc ccagatgtta atgctctcat ccatggctga aaaaggccaa gaaactaaga 480
 agagctgttg acgcacagac tggcagagac accgagaggg cactgcgacc gcactgcaca 540
 gatgagcaaa ggaaggccaa cttcagcatt cctctctcct ctctaagccc ctccaaaagg 600
 cctgctcagg gagctctggc caccgttctc aagcaattgc ctgacgtttt tactgacact 660
 gagggctgga gatggctcct tttccaggca gctatgtgtc catttcctag agagggaaac 720
 tgagtcccag agaaggcggg tgtggctgga ggccatgggt cagtcatagg cataaccatg 780
 ccgtgaataa ccgtcttggc actctctgac tttcttccct ggcaatacaa cggatcccag 840
 tgcccatttg tcacataagg aaactgaggc tggcgtcttc gatgaagcct ggcaggagtg 900
 ggggtcacac acggagtga aggctgtcca agccttcaag gtcattctga ctgatctttg 960
 agccttagca atacaggacg tgggtccaag agcatttcca gcacaaaatg gcgcctcata 1020
 gaaaaatgta gtcggagtgc cagcgccac ctccaccacg gctcaaagga gggggcgcgg 1080

127

gcggcagcgc acacttcatt tgcataatac aaaatcaacg gatttcgttg gctggcagcg 1140
 gtttgatctg cagcaaaactg ggtcgccctc tgaccggtct ctatcagtca ttggcccatg 1200
 cgagtctcgt gacccaccag tcaactaaagc gcatccctat tggcccgagc gccttccatc 1260
 acgcgtttaa aaccccgagt cccgcctccc ctcgccacgc tccggccccc aggaagaccg 1320
 ttagtcgcgt gcgcgacttc ctacagctca gggcgcgccc gcgcgtatgc cgggccgtgg 1380
 cggcgctctca ttcaaacggt ccaatcagcg gccgcgtcgc ctccccgcgc ccccttccctc 1440
 tcttcttccc cttttcagcc cctccgttct ttgagaacct tcccgacccc cgcgggcccc 1500
 cattggccgg cccgctaccc agccctctcc gccacttccc tcgcttctga ccatagtttg 1560
 cggggaaggg agcgagcgcg tcgaaaacca aggaacgtgc gcgctgacgt cacggttgag 1620
 gctcggagct gaggggcccgc ggaggcgctg gcctcggggc ggtataaaag aggcagtggg 1680
 gcgcgcgcgg ccggctcagt gctgccgggc accggggcgg cgggttggtc tacgctgtgc 1740
 gcggcgagcg tcggaggcag cggggagcgg agcggggccg ccggggcctc tccagggccg 1800
 cagcggcagc agttgggccc cccgccccgg ccggcgagacc gaagaacgca ggaagggggc 1860
 cgggggggacc cgcccccggc cggccgcagc catgaactcc aacgtggaga acctaccccc 1920
 gcacatcatc cgctcgtgtg acaaggaggt gacgacactg accgcagacc caccgatgg 1980
 catcaaggtc tttccaacg agggaggacct caccgacctc caggtcarca tcgaggsgccc 2040
 tgaggggacc ccatatgctg gaggtctgtt ccgcatgaaa ctctgctgg ggaaggactt 2100
 ccctgcctcc ccacccaagg gctacttctt gaccaagatc ttccaccgca acgtggcgcg 2160
 caatggcgag atctgctca acgtgctcaa gagggactgg acggctgagc tgggcatccg 2220
 acacgtactg ctgaccatca agtgccctgct gatccacct aaccccgagt ctgcactcaa 2280
 cgaggaggcg ggccgcctgc tcttgagaaa ctacaggag tatgcagctc gggcccgtct 2340
 gctcacagag atccacgggg gcgcggcggc gccagcggc agggccgaag ccggtcgggc 2400
 cctggccagt ggcactgaag ctctctccac cgacctggg gccccgggccc ggagggtga 2460
 agtccattgg ccagagcatg tgggaaggga aagacgttgg ggcagaaaga cgacagacgg 2520
 cgcgcgcgtg aaggctcttc tctcacgtga ccattctgct cccaatttta gtaattgcgg 2580
 cccgagcggg cgccgtgtca atgccccaac aaaaaaacct tctcgaaaag gtgtcctcag 2640
 tgctgctttt caggcgctgc ttcttca 2667

<210> 84
 <211> 2648
 <212> DNA
 <213> Homo sapien

<400> 84

128

ttgggtttttt tttttttttt gcttttttgt tttttgagac agsgtcttgc tctgttgccc	60
aggctggggg gcagtggcga gatctcagtt cactgcaacc tccacatccc ggctttaacc	120
gatttctcca tctcagcctc acgagtagct gggattacag ggctgcatca acacacctgg	180
ctaatttttg tatttttagt acagatgggg tttcaccatg ttggccaggc tggctctaaa	240
ctcctgacct cagggtgatct gccagcttca gcctcccaaa gtgctgggat tacaggcgtg	300
agctaccacg cctggccttg gccatgtaga tttctttcac accttctta ttctttcttc	360
agaagctgag gcccacatgag ggaagctgg tagccagggg tcttttcagg tacctgtggc	420
caaattaggc ccagatgtta atgctctcat ccatggctga aaaaggccaa gaaactaaga	480
agagctgtgg acgcacagac tggcagagac accgagaggg cactgcgacc gcactgcaca	540
gatgagcaaa ggaaggccaa cttcagcatt ccctcctcct ctctaagccc ctccaaaagg	600
cctgctcagg gagctctggc caccgttctc aagcaattgc ctgacgtttt tactgacact	660
gagggtctga gatggctcct tttccaggca gctatgtgtc catttcctag agagggaac	720
tgagtcccag agaaggcggg tgtggctgga ggccatgggt cagtcatagg cataaccatg	780
ccgtgaataa ccgtcttggc actctctgac ttctttccct ggcaatacaa cggatcccag	840
tgcccatttg tcacataagg aaactgaggc tggcgtcttc gatgaagcct ggcaggagtg	900
ggggtcacac acggagtga aggctgtcca agccttcaag gtcattctga ctgatcttg	960
agccttagca atacaggacg tgggtccaag agcatttcca gcacaaaatg gcgcctcata	1020
gaaaaatgta gtccgagttc cagcgccac ctccaccacg gctcaaagga gggggcgcg	1080
gcggcagcgc acacttcatt tgcataatac aaaatcaacg gatttcgttg gctggcagcg	1140
gtttgatctg cacgaaactg ggtcgccctc tgaccgggtc ctatcagtca ttggcccatg	1200
cgagtctcgt gaccaccag tcaactaaagc gcatccctat tggcccgagc gccttccatc	1260
acgcgtttaa aaccccgagt cccgcctccc ctgcacacg tccggccccc aggaagaccg	1320
ttagtcgctg gcgcgacttc ctacagctca gggcgcgccc gcgcgtatgc cgggcccgtg	1380
cggcgtctca ttcaaacggc ccaatcagcg gccgcgtcgc ctccccgtc ccccttctc	1440
tcttcttccc cttttcagcc cctccgttct ttgagaaccc tcccgaaccc cgcgggcccc	1500
cattggccgg cccgctaccc agccctctcc gccacttccc tcgcttctga ccatagtttg	1560
gggggaaggg agcgagcgcg tcgaaaacca aggaacgtgc gcgctgacgt cacggttag	1620
gctcggagct gaggggcccgc ggagggcgtg gcctscgggc ggttataaag aggcagtgg	1680
gcgcgcgcgg ccggctcagt gctgccgggc accggggcgg cgggttggtc tacgctgtgc	1740
gcggcgagcg tcggaggcag cggggagcgg agcggggcgg ccggggcctc tccaggggcg	1800
cagcggcagc agttggggccc cccgccccgg ccggcgagac gaagaacctc ccccgccaca	1860

129

tcatccgcct ggtgtacaag gaggtgacga cactgaccgc agaccacccc gatggcatca 1920
 aggtctttcc caacgaggag gacctcaccg acctccaggt caccatcgag ggccctgagg 1980
 ggaccccata tgctggaggt ctgttccgca tgaaactcct gctggggaag gacttccctg 2040
 cctccccacc caagggctac ttcttgacca agatcttcca cccgaacgtg ggcgccaatg 2100
 gcgagatctg cgtcaacgtg ctcaagaggg actggacggc tgagctgggc atccgacacg 2160
 tactgctgac catcaagtgc ctgctgatcc accctaaccg cgagtctgca ctcaacgagg 2220
 aggcggggccg cctgctcttg gagaactacg aggagtatgc agctcggggc cgtctgctca 2280
 cagagatcca cgggggcgcc ggccggccca gcggcagggc cgaagccggt cgggccctgg 2340
 ccagtggcac tgaagcttcc tccaccgacc ctggggcccc agggggcccc ggaggggctg 2400
 aggggtcccat ggccaagaag catgctggcg agcgcgataa gaagctggcg gcccaagaaaa 2460
 agacggacaa gaagcggggc ctgcggcggc tgtagtgggc tctcttctc cttccaccgt 2520
 gaccccaacc tctcctgtcc cctccctcca actctgtctc taagttattt aaattatggc 2580
 tggggtcggg gaggggtacag ggggcactgg gacctggatt tgtttttcta aataaagtgt 2640
 gaaaagca 2648

<210> 85

<211> 2800

<212> DNA

<213> Homo sapien

<400> 85

ttgggttttt tttttttttt gcttttttgt tttttgagac agggctcttg tctgttgccc 60
 aggctggggg gcagtggcga gatctcagtt cactgcaacc tccacatccc ggctttaacc 120
 gattctccca tctcagcctc acgagtagct gggattacag ggctgcatca acacacctgg 180
 ctaatttttg tatttttagt acagatgggg ttccaccatg ttggccaggc tgggtctcaa 240
 ctctgacct cagggtgatct gccagcttca gcctcccaaa gtgctgggat tacaggcgtg 300
 agctaccacg cctggccttg gccatgtaga tttctttcac accttcctta ttctttcttc 360
 agaagctgag gccccatgag gggaagctgg tagccagggg tcttttcagg tacctgtggc 420
 caaattaggc ccagatgta atgctctcat ccatggctga aaaaggccaa gaaactaaga 480
 agagctgtgg acgcacagac tggcagagac accgagaggg cactgcgacc gcactgcaca 540
 gatgagcaaa ggaaggccaa cttcagcatt cctcctcct ctctaagccc ctccaaaagg 600
 cctgctcagg gagctctggc caccgttctc aagcaattgc ctgacgtttt tactgacact 660
 gagggctgga gatgggtccct tttccaggca gctatgtgtc catttcctag agagggaaac 720
 tgagtccag agaaggcggg tgtggctgga ggccatgggt cagtcatagg cataaccatg 780

ccgtgaataa ccgtcttggc actctctgac ttctttccct ggcaatacaa cggatcccag 840
 tgcccatttg tcacataagg aaactgaggc tggcgtcttc gatgaagcct ggcaggagtg 900
 ggggtcacac acggagtga aggctgtcca agccttcaag gtcattctga ctgatctttg 960
 agccttagca atacaggacg tgggtccaag agcatttcca gcacaaaatg gcgcctcata 1020
 gaaaaatgta gtcggagtgc cagcgccac ctccaccacg gctcaaagga gggggcgcg 1080
 gcggcagcgc acacttcatt tgcataatac aaaatcaacg gatttcgttg gctggcagcg 1140
 gtttgatctg cacgaaactg ggtcgccctc tgaccggtct ctatcagtca ttggcccatg 1200
 cgagtctcgt gaccaccag tcaactaaagc gcatccctat tggcccgagc gccttccatc 1260
 acgctttaa aaccccgagt ccgcctccc ctgcacacg tccggccccc aggaagaccg 1320
 ttagtcgcgt gcgcgacttc ctacgcgtca gggcgcgccc gcgcgtatgc cgggcccgtg 1380
 cggcgcttca ttcaaacggt ccaatcagcg gccgcgtcgc cttccccgtc ccccttccctc 1440
 tcttcttccc cttttcagcc cctccgttct ttgagaacct tcccgacccc cgggggcccc 1500
 cattggccgg cccgctaccc agcctctctc gccacttccc tcgcttctga ccatagtttg 1560
 cggggaaggg agcgagcgc tcgaaaacca aggaacgtgc gcgctgacgt cacggttgag 1620
 gctcggagct gaggggccc gcaggcggtg gcctgcgggc ggttataaag aggcagtgg 1680
 gcgcgcgcgg ccggctcagt gctgccgggc accggggcgg cgggttggtc tacgctgtgc 1740
 gcggcgacg tcggaggcag cggggagcgg agcggggcgg cgggggcctc tccagggccg 1800
 cagcggcagc agttgggccc ccgccccgg ccggcgacc gaagaacgca ggaagggggc 1860
 cggggggacc cgcgccggc cgccgcagc catgaactc aacgtggaga acctacccc 1920
 gcacatcatc cgctggtgt acaaggaggt gacgacactg accgcagacc caccgatgg 1980
 catcaaggtc tttcccaacg aggaggacct caccgacctc caggtcacca tcgagggccc 2040
 tgaggggacc ccatatgctg gaggtctgtt ccgcatgaaa ctctgtctgg ggaaggactt 2100
 ccctgcctcc ccacccaagg gctacttccct gaccaagatc ttccacccga acgtggcg 2160
 caatggcgag atctgcgtca acgtgtcaa gagggactgg acggctgagc tgggcatccg 2220
 acacgtactg ctgctttcct ggaaagacaa acagtgccag acccaggaca cccaagtact 2280
 gttgagaagt gccaggagc accttactat gcaacgagt accatcaagt gcctgtgat 2340
 ccaccctaac ccgagtctg cactcaacga ggagcgggc cgctgtctt tggagaacta 2400
 cgaggagtat gcagctcgg cccgtctgct cacagagatc cacggggcg ccggcgggcc 2460
 cagcggcagg gccgaagccg gtcgggccc ggccagtggc actgaagctt cctccaccga 2520
 ccctggggcc ccagggggcc cgggaggggc tgagggctcc atggccaaga agcatgctgg 2580

131

cgagcgcgat aagaagctgg cggccaagaa aaagacggac aagaagcggg cgctgcggcg 2640
 gctgtagtgg gctctcttcc tcttccacc gtgaccccaa cctctcctgt cccctccctc 2700
 caactctgtc tctaagttat ttaaattatg gctgggggtcg gggaggggtac agggggcact 2760
 gggacctgga tttgtttttc taaataaagt tggaaaagca 2800

<210> 86
 <211> 717
 <212> DNA
 <213> Homo sapien

<400> 86
 cccagggggc tcatcccagc ctggacttga cacgttgctc tctgttttta cctaaaagag 60
 ccagaagcgc tatcacgaag atatctttgg tgctgtatct ccttacgagg cgaagaagga 120
 caggggtggcg gtgcagccca gcagcctgga gatgtcagcg ctctgagggc ctacaggagg 180
 ggttaaaagct gccggcacag aacttaagga tggagccagc tctgcattat ctgaggtcac 240
 agggcctggg gagatggagg aaagtgatat cccccagcct caagtcttat ttcctcaacg 300
 ttgctcccca tcaagccctt tacttgacct cctaacaagt agcaccctgg attgatcgga 360
 gcctcctctc tcaaaactggg gcctccctgg tcccttggag acaaaatctt aaatgccagg 420
 cctggcaagt gggtgaaaga tggaaactgc tgctgagtgc accacttcaa gtgaccacca 480
 ggagggtgcta tcgcaccact gtgtatttaa ctgccttggt tacagttatt tatgcctctg 540
 tatttaaaaa actaacaccc agtctgttcc ccatggccac ttgggtcttc cctgtatgat 600
 tccttgatgg agatatttac atgaattgca ttttacttta atcacactgt atgcgtgtgt 660
 ggggtgttttg tagggaaagc tcttctcaga gtggggagct ggtgggtgtc acagcct 717

<210> 87
 <211> 1098
 <212> DNA
 <213> Homo sapien

<400> 87
 tgccagggag ctccaacaga actgagggac gaacagtagg tgcctgagag ctggccgac 60
 tggtcactct ctccagtggg ccacaggggc ccacttggtg ggcagtctct gctgccagct 120
 agggcatctc agctcagccc agagcaaaga cgtgtagggg cataacgctt tcctcaagct 180
 tcctttccca ggtccaaact tagaggccca gttttggggc tagaattcac tgaggtttgt 240
 ggctgtttgt ccaacagtca ccatggatca ccgaagccga ctacggggca caggcctgaa 300
 ccgaatccct gggactcagt cccgagcccc ccgagtccca ctccccttcc acgtgcaaca 360
 ggaggccagg gaaggagaag actgggagcg agagccacct cgtcagaggc ctccatctta 420
 tgagccacca gaaagtgaag agctgccaga taatgttatg gtttccaagc cagcgcctta 480

132

```

ctgggaagga acagctgtga tcgatggaga atttaaggag ctgaagttaa ctgattatcg      540
tgggaaatac ttgggtttct tcttctaccc acttgatttc acatttgtgt gtccaactga      600
aattatcgct tttggcgaca gacttgaaga attcagatct ataaatactg aagtggtagc      660
atgctctggt gattcacagt ttaccatctt ggcttgatt aatacccctc gaagacaagg      720
aggacttggg ccaataagga ttccacttct ttcagatttg acccatcaga tctcaaagga      780
ctatggtgta tacctagagg actcaggcca cactcttaga ggtctcttca ttattgatga      840
caaaggaatc ctaagacaaa ttactctgaa tgatcttctt gtgggtagat cagtggatga      900
gacactacgt ttggttcaag cattccagta cactgacaaa cacggagaag tctgccctgc      960
tggctggaaa cctggtagtg aaacaataat ccagatcca gctggaaagc tgaagtatct    1020
cgataaactg aattgagaaa tacttcttca agttatgatg cttgaaagtt ctcaataaag    1080
ttcacgggtt cattacca                                     1098

```

```

<210> 88
<211> 731
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (21)..(21)
<223> n=a, c, g or t

```

```

<400> 88
tatagataga tatgtttatc nccataactc ataactggga gtattatacc caagaggctt      60
tggtacaagg tatttttttac cctgtagta aatattttcc tgtaattcta taataagcaa      120
ataaattttc atgggtgggg tagatgcaa aaaaaagaa ttcgaattcg aattcggaac      180
gtcatcgttt ggaaagcgtc gcaataagac gcacacgttg tgccgccgct gtggctctaa      240
ggcctaccac cttcagaagt cgacctgtgg caaatgtggc taccctgcc aagcgaagag      300
aaagtataac tggagtgcc aaggctaaaag acgaaatacc accggaactg gtcgaatgag      360
gcacctaaaa attgtatacc gcagattcag gcatggattc cgtgaaggaa caacacctaa      420
accaagagg gcagctgttg cagcatccag ttcactctta gaatgtcaac gattagtcac      480
gcaataaatg ttctggtttt aaaaaatata tatctggttt tggtaaggta tttttaatca      540
attaggcttg tagtatcagt gaaatactgt aggtttaggg actgggctag cttcatatca      600
gatttacttg ttaagtgact gttttggaat gtttactttt ggactgggtt tgtaacacgg      660
ttaaaggcaa tgagaaacaa gcagaattcc aggagtcctt gaagcagagg gcactggaag      720
acaatatagc a                                           731

```


133

<210> 89
 <211> 777
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (50)..(50)
 <223> n=a, c, g or t

<220>
 <221> misc_feature
 <222> (90)..(90)
 <223> n=a, c, g or t

<220>
 <221> misc_feature
 <222> (199)..(199)
 <223> n=a, c, g or t

<220>
 <221> misc_feature
 <222> (201)..(201)
 <223> n=a, c, g or t

<220>
 <221> misc_feature
 <222> (204)..(204)
 <223> n=a, c, g or t

<220>
 <221> misc_feature
 <222> (206)..(206)
 <223> n=a, c, g or t

<400> 89
 atgttctttg ttgacaatc tcataagact ttagtcttac agacgaccn tcgaagtctg 60
 ctggcacaca ccacatgcag attttggtgn ttcccaacc ttcttggtat aaaggtaaac 120
 aattctatta ccaggggttc gggacagcct agttttgtta gaggctgtat ttaggaaaag 180
 cctacgtcgg tatgtcaana nctntncgaa ttcgccgag gggaacgtca tcgtttggaa 240
 agcgtcgcaa taagacgcac acgttgtgcc gccgctgtgg ctctaaggcc taccaccttc 300
 agaagtcgac ctgtggcaaa tgtggctacc ctgccaagcg caagagaaaag tataactgga 360
 gtgccaaggc taaaagacga aataccaccg gaactggctcg aatgaggcac ctaaaaattg 420
 tataccgcag attcaggcat ggattccgtg aaggaacaac acctaaacc aagagggcag 480
 ctgttcgacg atccagttca tcttaagaat gtcaacgatt agtcatgcaa taaatgttct 540

134

ggttttaaaa aatacatatc tggttttggt aaggtatatt taatcaatta ggcttgtagt 600
 atcagtgtaaa tactgttagt ttagggactg ggctagcttc atatcagatt tacttggttaa 650
 gtgactgttt tggaaatgtt acttttggac tgggtttgta acacgggtta aggcaatgag 720
 aaacaagcag aattccagga gtccttgaag cagagggcac tggagacaa tatagca 777

<210> 90
 <211> 564
 <212> DNA
 <213> Homo sapien

<400> 90
 atgcatgccg agcggcgag tgtgatggat cgtggtcgag gccgaggtcg ttgtgccgcc 60
 gctgtggctc taaggcctac caccttcaga agtcgacctg tggcaaatgt ggctaccctg 120
 ccaagcgcaa gagaaagtat aactggagtg ccaaggctaa aagacgaaat accaccggaa 180
 ctggtcgaat gaggcaccta aaaattgtat accgcagatt caggcatgga ttccgtgaag 240
 gaacaacacc taaaccaag agggcagctg ttgcagcatc cagttcatct taagaatgtc 300
 aacgattagt catgcaataa atgttctggt tttaaaaaat acatattctgg ttttggttaag 360
 gtatttttaa tcaattaggc ttgtagtatc agtgaaatac tgtaggttta gggactgggc 420
 tagcttcata tcagatttac ttgttaagtg actgttttgg aatgtttact tttggactgg 480
 gtttgtaaca cggttaaagg caatgagaaa caagcagaat tccaggagtc cttgaagcag 540
 agggcactgg aagacaatat agca 564

<210> 91
 <211> 540
 <212> DNA
 <213> Homo sapien

<400> 91
 atgcatgccg agcggcgag tgtgatggat cgtggtcgag gccgaggtag gcctaccacc 60
 ttcagaagtc gacctgtggc aaatgtggct accctgccaa gcgcaagaga aagtataact 120
 ggagtgccaa ggctaaaaga cgaaatacca ccggaactgg tcgaatgagg cacctaaaaa 180
 ttgtataccg cagattcagg catggattcc gtgaaggaaac aacacctaaa cccaagaggg 240
 cagctgttgc agcatccagt tcatcttaag aatgtcaacg attagtcatg caataaatgt 300
 tctggtttta aaaaatacat atctggtttt ggtaaggat ttttaataca ttaggcttgt 360
 agtatcagtg aaatactgta ggtttaggga ctgggctagc ttcatatcag atttacttgt 420
 taagtgactg ttttggaatg tttacttttg gactgggttt gtaacacggt taaaggcaat 480
 gagaaacaag cagaattcca ggagtccttg aagcagaggg cactggaaga caatatagca 540

135

<210> 92
 <211> 1103
 <212> DNA
 <213> Homo sapien

<400> 92
 gatgcatgct cgagcggcgc aggtgatgga tgcgcccggg caggtegccg agcaggaggc 60
 gccatcatgg gagtggacat ccgccataac aaggaccgaa aggttcggcg caaggagccc 120
 aagagccagg atatctacct gaggctgttg gtcaagttat acaggtttct ggccagaaga 180
 accaactcca cattcaacca ggttggtgtg aagaggttgt ttatgagtcg caccaaccgg 240
 ccgcctctgt ccctttcccg gatgatccgg aagatgaagc ttcctggccg ggaaaacaag 300
 acggccgtgg ttgtggggac cataactgat gatgtgcggg ttcaggaggc acccaaactg 360
 aaggatatgt cactgcgcgt gaccagccgg gccgcagcc gcctcctcag ggcagggggc 420
 aagatcctca ctttcgacca gctggccctg gactccccta agggctgtgg cactgtcctg 480
 ctctccggtc ctgcgaaggc ccgagaggtg taccggcatt tcggcaaggc ccaggaacc 540
 ccgcacagcc acaccaagtg agtatcaggc cccagccct gccctctccc cagactcagc 600
 ctgcagggcc aggcctggcc acacttgggc tgcttctcct atccctcgta ccagccagcc 660
 ccaggccttc tggaaacttc agctgcctca tcctgcctgc ttttcccttc aactgtctt 720
 ggagctgtgt tttccagggc ctgagcaggc atctcctggg gagcatgcag ttcaccggcc 780
 tttgccagcc caggctggga ccctccaggc ggtggggcag gtgcttccat agccctcct 840
 ggctccttgg cttccactc tgccaagctt ttccagcagc attgactctc ctggggctga 900
 atgtgacagg ctgtgtgtg tcctgtgcca ctccacaatg gcctccttta agaggggccc 960
 cctctcactc cctcctctcc ccacagacc tacgtccgt ccaagggccg gaagttcgag 1020
 cgtgccagag gccgacgggc cagccgaggc tacaaaaact aacctggat cctactctct 1080
 tattaaaaag atttttgctg aca 1103

<210> 93
 <211> 398
 <212> DNA
 <213> Homo sapien

<400> 93
 gatgcatgct cgagcggcgc aggtgatgga tgcgcccggg caggtegccg agcaggaggc 60
 gccatcatgg gagtggacat ccgccataac aaggaccgaa aggttcggcg caaggagccc 120
 aagagccagg atatctacct gaggctgttg gtcaagttat acaggtttct ggccagaaga 180
 accaactcca cattcaacca ggttggtgtg aagaggttgt ttatgagtcg caccaaccgg 240
 ccgcctctgt ccctttcccg gatgatccgg aagatgaagc ttcctggccg ggaaaacaag 300

136

acggccgtgg ttgtggggac cataactgat gatgtgcggg ttcaggaggt acccaaactg 350
 atcggccgcg accacgctaa gccggattcc agcacact 398

<210> 94
 <211> 1673
 <212> DNA
 <213> Homo sapien

<400> 94
 gccagtgtga tggattggtc gcggcgaggt ggccgagcag gagggcccat catgggagtg 60
 gacatccgcc ataacaagga ccgaaagggt cggcgcaagg agcccaagag ccaggatatc 120
 tacctgaggc tgttgggtcaa gttatacagg tttctggcca gaagaaccaa ctccacattc 180
 aaccaggttg tgttgaagag gttgtttatg agtcgcacca accggccgcc tctgtccctt 240
 tcccggatgg tgagtggctg gtccagagag caccgtagac ctgggagccg ctgggtcttg 300
 tctgtctgga agggagcgag gacttggagc tctgggagca accagggcat caagggtttg 360
 tctcagccag tcgcgagcgt agagcttgga ctgttggttg gaactgagtg tccatgggca 420
 gtgggcaagt ctccctggtc tctctcctt ctctttgtga ggtggaggtg tccctggcggc 480
 ttcaggagat tgccccaagt cataactgag ttttatgtca aaggctctgc tgaggggaggc 540
 cctattgaac agtctgcatt ttttttttta tctggagctt tcccagctg gacctgagga 600
 gaggcctgtg gggtttaagg ggtgtggtgt gagtgggggg tcccgttaga gggcacagct 660
 gccctggcct ggggatgcct caagcggggc tgaatgtaaa caccagaaca acttacgacg 720
 tacatcctcc ccaccctaag atccggaaga tgaagcttcc tggccgggaa aacaagacgg 780
 ccgtgggttg ggggaccata actgatgatg tgggggttca ggaggtagcc aaactgaagg 840
 tgagctggcg ggggctgggc agaccatca gaccttgct gtactgtgct gtgctgtgct 900
 gtgctgtgct gtgctgtgct ggtccatcct cagtcttgcc accgctgggt aggcaagcat 960
 cctgcctgtc tgagtggctt tgaggattgg tgtgggtcgt ctctggcatg gttgatgggt 1020
 ggggtcccctg ggcaagcttc ttctggggca agtgttaaac tgttagtgct ggcccctaga 1080
 gccagacagc ctgggctcaa gtctagactc ctttgtcacc tctgcacagg tctttttttg 1140
 gccagcttc cttgctgtag tttctagcat aacaccaggg atgtgggtgg gaaagtcccg 1200
 gaagtgttga gaactgctgc tgtcagccca gggtgctccg ggtagtaaac gatagtgttg 1260
 gttaccaggg ctctgctgcg ccaaggcagt ggagggtgag tccctggcagc cctgggtga 1320
 ccacgcaggg gtctgacctg ccagccttgt cctctccacc aggtatgtgc actgcgcgtg 1380
 accagccggg cccgcagccg catcctcagg gcagggggca agatcctcac tttcgaccag 1440
 ctggccctgg actccctaa gggtgtggc actgtcctgc tctccggtcc tcgcaagggc 1500

137

cgagaggtgt accggcattt cggcaaggcc ccaggaaccc cgcacagcca caccaaacc 1560
 tacgtccgct ccaagggccg gaagttcgag cgtgccagag gccgacgggc cagccgaggc 1620
 tacaaaaact aaccctggat cctactctct tattaaaaag atttttgctg aca 1673

<210> 95
 <211> 1121
 <212> DNA
 <213> Homo sapien

<400> 95
 tgagtgcctg gaccctgacc tccaacggga gatccttccc gggggcattc cctaaatcgt 60
 gggcttggtt cttgctccct ctggctattc tgggtccctg tggctgctcc ccaaccctaa 120
 gggctgtccc tgatctctct tgcattttcc ccaagccga gactgctccc ttacaaattc 180
 tggctgctcc ctttccctgt gtccaatacc gtgtgatcac ctgtccctcc ctggctccctc 240
 taattctccc ttgtgactat tctgtaatcc cactccccgt tectgagccc ccgggattgt 300
 ttcttggttc ccagaatgt tctccaagaa cccaaagtgc tgttccctaa tccactgac 360
 ccttctcag cacatctgct tgttgctctg cagctctgac tattccagac accagaggggt 420
 gttacactga cctcctggct agtccaagcc tgttccctga tggctcctga tggcctctga 480
 gccagtgac tatcttgaag cccactggc tattcctgtg cttaaactcc ttagccgcca 540
 accgggtggg gcccttact actgccagtt tttccctgtc ctttgggaca attccacagg 600
 cgacctgcct gactgacccc cagggcctat tccccagcca ccattccagg aactgattt 660
 actggcttac tgttacctt caggaccag tgacatttcc ctcaatggga ggggctgtcc 720
 tggggtatgt acttaggtgg ggtgagagca agtctccca gccgctcagt gttgaaagct 780
 gaggagagga agttctgtc cacgggggag gcaggagaa gccctcagag atgtttccct 840
 cctcccttcc aggtgtttcc ctgtttatcc atccctgca aactgcagag tggcactcat 900
 tgcttggtga cggaccagct cctccaaggc tctgaaaagg gcttccagtc ccgtcacctt 960
 gcctgcctgc ctggggagcc agggctgtgc acctggcagt ccctgcggtc ccagatagcc 1020
 tgaatcctgc ccggagtga agctgaagcc tgcacagtgt ccacctgtt cccactccca 1080
 tctttcttcc ggacaatgaa ataaagagtt accaccagc a 1121

<210> 96
 <211> 570
 <212> DNA
 <213> Homo sapien

<400> 96
 ccagtccctg gggcgcggcc tagcaaccac gagggggcga ggctctgatg ggaatgggtcc 60

138

cactggaaat ggggaccacc ccaatttcag tctatcagaa ggccgggcct ttggcagctt 120
 ggcagctcag ccaatcacia gctgcttgct ggtccccgcc ccgcctttct ccttaggaaa 180
 actgcaggat ggactcttgc acatcactac ctgcagtttt gtggctccct ggaacagcct 240
 gagcttagct cagcgccggg gcttcaccaa gacctacact gttggctgtg aggaatgcac 300
 agtgtttccc tgtttatcca tcccctgcaa actgcagagt ggcactcatt gcttgtggac 360
 ggaccagctc ctccaaggct ctgaaaaggg cttccagtcg cgtcaccttg cctgcctgcc 420
 tcgggagcca gggctgtgca cctggcagtc cctgcggtcc cagatagcct gaatcctgcc 480
 cggagtggaa gctgaagcct gcacagtgtc caccctgttc ccactcccat ctttcttccg 540
 gacaatgaaa taaagagtta ccaccagca 570

<210> 97
 <211> 4990
 <212> DNA
 <213> Homo sapien

<400> 97
 gggagtcggc ggcacaaaat ggcggcggcg gcggcggcgg ctggtgctgc agggtcggca 60
 gctcccgcg cagcgcccg gcgcccgga tctggggcg caccctcagg gtcgcagggg 120
 gtgctgatcg gggacaggct gtactccggg gtgctcatca ccttgagaa ctgcctcctg 180
 cctgacgaca agctccgttt cagcgctcc atgtcgagcg gcctcgacac cgacacagag 240
 accgacctcc gcgtgggtgg ctgcgagctc atccaggcgg ccggtatcct gctccgcctg 300
 ccgcaggctg ccatggctac cgggcagggt ttgttccagc ggttctttta taccaagtcc 360
 ttggtgaagc actccatgga gcatgtgtca atggcctgtg tccacctggc ttccaagata 420
 gaagaggccc caagacgcat acgggacgtc atcaatgtgt ttcaccgcct tcgacagctg 480
 agagacaaaa agaagcccg gcctctacta ctggatcaag attatgttaa tttaaagaac 540
 caaattataa aggcggaaa agcagttctc aaagagttgg gtttctgcgt ccatgtgaag 600
 catcctcata agataatcgt tatgtacctt cagggtgttag agtctgagcg taaccaacac 660
 ctgggtccaga cctcatgggt agcctctgag ggtaagtgc taagacttct cctctgctgt 720
 ccaagcgctt tgggtcgagg acagcggcct cttcagccaa tccagtgcag gctctccacc 780
 gaaggctggc tctagactgg tggtagcac atagcatagc catggccgac tctgtgtgtg 840
 gttctctgac gattgtgctt cttgttaatc ctctgtcgtg ctttggtaat cgtattgatt 900
 agagttggta actgtcttga cttgaatttt gtccctttaa aactgctgta cctgtatgat 960
 aaagatgcag tacctttctc ttaaaaaaaa atgctatgga aagctgtgag aattgaagag 1020
 acaaatggc tgtgtcagtg tggggttatg tcatgatttc tagaagccct gaagttgctc 1080

139

ttttgagcag ctttgcacga cacgctctgg taaaagggtg gcacctcttaa attatttcat 1140
 ggatactttg aaaaatattg tatcacttca aatacagcaa taagtttata tgttctcaag 1200
 atttcatttg tttttaagaa ttttaagttc gtggattaat atcactactt gaatactgac 1260
 agttgttgat tagacaccga aaggttactg attgttgaat gtatctgtgt tagagctgtg 1320
 cactggcacg cttgcatcag gggctggggc cacacggccg ccacacagat tccccctga 1380
 tgccctggagc tgcttccaga gccgggtgtc tccaagaggc acctgtagga cttcccat 1440
 agaaatctct tgagtgggtt tgtatgttac cttctccaag gtttatttag gacagagata 1500
 ttgctggaag gtcacgggtc agattccctc acaaccacc tcgtctgcgg gtgcagcccc 1560
 actccaaggc tccccgttat tggggatatg gaggagcagt aaatataaaa ccagtccaac 1620
 tgcctcatg gaatcacctt ttctgttttt gcagtattca taaagctagt gtaaggctctg 1680
 gttttagtct attaaatctt agagatctaa aggaaatgct caaaatgtag ccaggtttta 1740
 aatgctttaa cttttaaaaa atgtaaattt ttgtatgtt atagcttcta aatatgaaag 1800
 ttaaagaatg tactgtgatg aaatgttcag tattatgttg cttctcagta tcatgttgct 1860
 tctcagtatt gtgttgcttc tgattctatg aatgttcatt ttaagacccc ttgttgaaat 1920
 gggacagttg gcagcggtc tgatgagccc gagaagaggc ctgcccttgg gtgcggagtc 1980
 tccctccgca cgatgctccc acgctccaa cttgcaccca aggggctttt cctctctcca 2040
 agtggactcc ttcaaggaag ctgcagctcg gtcagcagag aaggggcctg ccgccagcgc 2100
 cctggaggaa gaggaagagg aaccaagag gatggcttgt ctcccagcag ccacaccggc 2160
 tttgtgctca gccagttcat ttgagtttgc atgtctctct gcactatgga ttttgagcat 2220
 ttagatttct ttaataaaaa gcgttttagt gactccagta gacattttct ttctgaggca 2280
 tcgtgctttg catgagagca ggccaagggt gaggggaaaa gttaaagttaa agtcggttct 2340
 ctttcatagc aacacgtatt gtctgacatt cagccagctt ttttttttcc taataatttc 2400
 tgtgcctttc tgcctgtat ttactgtatt tagaaaaagc agctagaata tttctccatt 2460
 aactcttgag attcacagga ctgtctagct ctgagtccta gcaatagact ccttagagga 2520
 gtagtacgtt tatctagatt ttctctagat aatgcaggcg gaagacctgg gttcccgggt 2580
 ggggcattgc agttcttcct gtgtttggct tccaggaatt acatgaacga cagccttcgc 2640
 accgacgtct tcgtgcgggt ccagccagag agcatcgcct tgccctgcat ttatcttgct 2700
 gcccgagcgc tggagatccc tttgcccaat cgtccccatt ggtttctttt gtttggagca 2760
 actgaagaag aaattcagga aatctgctta aagatcttgc agctttatgc tcgaaaaaag 2820
 gttgatctca cacacctgga gggtgaagtg gaaaaaagaa agcacgctat cgaagaggca 2880
 aaggcccaag ccgggggcct gttgcctggg ggcacacagg tgctggatgg tacctcgggg 2940

ttctctcctg	cccccaagct	ggtggaatcc	cccaaagaag	gtaaagggag	caagccttcc	3000
ccactgtctg	tgaagaacac	caagaggagg	ctggagggcg	ccaagaaagc	caaggcggac	3060
agccccgtga	acggcttgcc	aaaggggcca	gagagtcgga	gtcggagccg	gagccgtgag	3120
cagagctact	cgaggteccc	atcccgatca	gcgtctccta	agaggaggaa	aagtgcacagc	3180
ggctccacat	ctggtgggtc	caagtcgcag	cgctccctac	aaaggctctg	agattcgggg	3240
ctcccgaag	tccaaggact	gcaagtaccc	ccagaagcca	cacaagtctc	ggagccggag	3300
ttcttcccgt	tctcgaagca	ggtcacggga	gcgggaggat	aatccgggaa	aatacaagaa	3360
gaaaagtcac	tactacagag	atcagcgacg	agagcgctcg	aggctgatat	aacgcacagg	3420
ccgtcgctat	gagcgggacc	accctgggca	cagcaggcat	cggagggtgag	gcgggggttc	3480
agtgactggc	ggccgcaagc	ccttccctgg	ggagtacctg	atggctgccc	tttgaccccc	3540
ggtggctgcc	ctttgacccc	cgggtgtgct	ctcagcgcaa	gtggctcctag	aacaggattc	3600
tttttggaaa	tgtctgtcga	ctggaccttg	gtggatttgg	aaatggaaact	gagggaaccgg	3660
tgacacgtgc	ttcagaccgg	tctgggggtgc	ggcgacacac	tggggcccgtc	cagggtctag	3720
ctcggcagca	gctctgaggg	cagctcaatg	aaaaagtga	tgcacacgcc	cttgttggcg	3780
tggcctggca	tggcctgggtg	ctatcggcag	ccgtcttcca	ctccccgact	gatactcaat	3840
tacgtgaagc	caagaaagat	gattttttaga	acctttgcct	atattagggtt	gtacttatgt	3900
acatatatttg	cagtgtttca	caggagaaaag	tggccttaac	tgcccccttat	tctcttcca	3960
cgttgtaaat	aaacatgtgt	ttaatacaag	ttaaagctat	gtatgaaaac	tcagaaacttg	4020
aatcccgctca	gcttaaaaact	tgtgtaggga	atcctgactt	ttaaaatgtg	agggatatttg	4080
gatctgtgtt	gaaagtcgta	tattttttatc	tggtcggtgc	tgagtgcagg	ccaccagctc	4140
ctaaatagag	gttccctata	tgcgcgtatg	acatggtgaa	taaacacaac	tctctccact	4200
caggacatcc	ggagcgttat	ggacgtggta	ggtggctggt	ctgtgtgctt	gtgaaagtgt	4260
ccaggcgtgt	gcacagccag	tgcgccact	tccgggctcc	ttgctccctg	ctgtactgaa	4320
gttttggatt	ttgcatccaa	tcctgtgtgc	ctgcccttct	gccgaaggct	tgtgaggggc	4380
ctgagtcctc	tgcccatcag	gatgacaggc	tccttcctgc	agggccatag	gagggaagt	4440
ttggaaacac	agaatgattc	caaggtgtc	tcgttcctga	gggggactgg	tttgtaacct	4500
atgacatctg	tgggcgagag	aggcagctgg	gagcaggaca	cttgagggtt	cacccacagg	4560
gggtggcacc	tgcactctga	gtgcccccca	ctgtcatcag	ctgctcttta	ccgtggacac	4620
agttttgggt	ttggggacta	gggggccccca	ctcctgggtg	taccgtttgg	acttactagg	4680
gcagtgggac	atataggccg	gggctagtgg	gataacgggg	agttacgcct	gatgactttt	4740

141

ttgatggaat cctgcattag atagctggtg ggaccccccc ctcagaattg gggaactgag 4800
 gagactccag ggaggggtgtc cttccagggg gagcagctat gaggggcccc ctagcttcc 4860
 gtgcctggaa gtaagagaac cagtaaaggg ccatacacac ctgtacccaa gagaccgtc 4920
 tccatttgct ttcttttttt actaaataat tgtaaaatat tattatgaca taaagaacca 4980
 ttttaaggcca 4990

<210> 98
 <211> 4944
 <212> DNA
 <213> Homo sapien

<400> 98
 gggagtcggc ggcacaaaat ggcgggcgcg gcggcgggcg ctggtgctgc agggtcggca 60
 gctcccgcgg cagcgggcgg cgccccggga tctggggggcg caccctcagg gtgcgagggg 120
 gtgctgatcg gggacaggct gtactccggg gtgctcatca ccttgagaa ctgcctcctg 180
 cctgacgaca agctccgttt caccgcgtcc atgtcgagcg gcctcgacac cgacacagag 240
 accgacctcc gcgtggtggg ctgcgagctc atccaggcgg cgggtatcct gctccgctg 300
 ccgcagggtg ccatggctac cgggcagggt ttgttccagc ggttctttta tacciaagtcc 360
 ttcgtgaagc actccatgga gcatgtgtca atggcctgtg tccacctggc ttccaagata 420
 gaagaggccc caagacgcat acgggacgtc atcaatgtgt tccaccgcct tcgacagctg 480
 agagacaaaa agaagcccgt gcctctacta ctggatcaag attatgttaa tttaaagaac 540
 caaattataa aggcggaaag acgagttctc aaagagttgg gtttctgctt ccatgtgaag 600
 catcctcata agataatcgt tatgtacctt cagggtgttag agtgtgagcg taaccaacac 660
 ctggtccaga cctcatgggt agcctctgag ggtaagtac taagacttct cctctgctgt 720
 ccaagcgctt tgggtgcagg acagcggcat cttcagccaa tccagtgcag gctctccacc 780
 gaaggctggc tctagactgg tggtagcac atagcatagc catggccgac tcctgctgtg 840
 gttctctgac gattgtgctt cttgttaatc ctctgtcgtg ctttggtaat cgtattgatt 900
 agagtggta actgtcttga cttgaatttt gtccctttaa aactgctgta cctgtatgat 960
 aaagatgcag tacctttctc ttaaaaaaaaa atgctatgga aagctgtgag aattgaagag 1020
 acaaattggc tgtgtcagtg tggggttatg tcatgatttc tagaagccct gaagttgtc 1080
 ttttgagcag ctttgcatga cagctctgg taaaagggtg gcatctttaa attatttcat 1140
 ggatactttg aaaaatattg tatcacttca aatacagcaa taagtttata tgttctcaag 1200
 atttcatttg tttttaagaa ttttaagttc gtggattaat atcactactt gaatactgac 1260
 agttgttgat tagacaccga aaggttactg attgttgaat gtatctgtgt tagagctgtg 1320

142

cactggcacg cttgcatcag gggctggggc cacacggccg ccacacagat tcccccgta	1380
tgccctggagc tgcttccaga gccgggtgtc tccaagaggc acctgttaga cttcccat	1440
agaaatctct tgagtgggtt tgtatgttac cttctccaag gtttatntag gacagagata	1500
ttgctggaag gtcattgggtc agattccctc acaaccacc tcgtctgcgg gtgcagcccc	1560
actccaaggc tccccgttat tgggggtatgt gaggagcagt aaatataaaa ccagttcaac	1620
tgctctcatg gaatcaccct ttctgttttt gcagtattca taaagctagt gtaaggctctg	1680
gttttagtct attaaatctt agagatctaa aggaaatgct caaaatgtag ccagggtttta	1740
aatgctttta cttttaaaaa atgtaaatct ttgtatgttt atagcttcta aatatgaaag	1800
ttaaagaatg tactgtgatg aaatgttcag tattatgttg cttctcagta tcatgttgct	1860
tctcagtatt gtgttgcttc tgattctatg aatgttcatt ttaagacccc ttgttgaaat	1920
gggacagtgt gcagcggctc tgatgagccc gagaagaggc ctgcccttgg gtgcggagtc	1980
tccctccgca cgatgctccc acgcgtccaa cttgcaccca aggggctttt ccctcttcca	2040
agtggactcc ttcaagggaag ctgcagctcg gtcagcagag aaggggcctg ccgccagcgc	2100
cctggaggaa gaggaagagg aaccaagag gatggcttgt ctcccagcag ccacaccggc	2160
tttgtgctca gccagtcat ttgagtttgc atgtttctct gcactatgga ttttgagcat	2220
ttagatttct ttaatcaaaa gcgttttagt gactccagta gacattttct ttctgaggca	2280
tcgtgctttg catgagagca ggccaagggt gaggggaaaa gttaaagttaa agtcggttct	2340
ctttcatagc aacacgtatt gtctgacatt cagccagctt ttttttttcc taataatttc	2400
tgtgcctttc tgtcctgtat ttactgtatt tagaaaaagc agctagaata tttctccatt	2460
aactcttgag attcacagga ctgtctagct ctgagtccta scaatagact ccttagagga	2520
gtagtacgtt tatctagatt ttctctagat aatgcaggcg gaagacctgg gttcccgggt	2580
ggggcattgc agttcttcct gtgtttggct tccaggaatt acatgaacga cagccttcgc	2640
accgacgtct tcgtgcgggt ccagccagag agcatcgcct gtgcctgcat ttatcttgct	2700
gcccggacgc tggagatccc tttgccaat cgtccccatt ggtttctttt gtttggagca	2760
actgaagaag aaattcagga aatctgctta aagatcttgc agctttatgc tcggaaaaag	2820
gttgatctca cacacctgga ggggtgaagtg gaaaaaagaa agcacgctat cgaagaggca	2880
aaggcccaag cccggggcct gttgcctggg ggcacacagg tgctggatgg tacctcgggg	2940
ttctctcttg cccccaagct ggtggaatcc cccaaagaag gttaaaggag caagccttcc	3000
ccactgtctg tgaagaacac caagaggagg ctggaggggc ccaagaaagc caaggcggac	3060
agccccgtga acggcttgcc aaaggggcga gagagtcgga gtcggagccg gagccgtgag	3120
cagagctact cgaggctccc atcccgatca gcgtctccta agaggaggaa aagtgacagc	3180

143

ggctccacat ctggtgggtc caagtcgcag agccgctccc ggagcaggag tgactcccca 3240
 ccgagacagg cccccgcag cgctccctac aaaggctctg agattcgggg ctcccggaa 3300
 tccaaggact gcaagtaccc ccagaagcca cacaagtctc ggagccggag ttcttcccg 3360
 tctcgaagca ggtcacggga gccggcgat aatccggga aatacaagaa gaaaagtc 3420
 tactacagag atcagcgacg agagcgctcg aggtcgatg aacgcacagg ccgtcgctat 3480
 gagcgggacc acccgggtggc tgccctttga ccccggggtg tgctctcagc gcaagtgg 3540
 ctagaacagg attctttttg gaaatgtctg tcgactggac cttgggtggat ttggaaatg 3600
 aactgagggg ccgggtgacac gtgcttcaga ccggctctgg gtgcggcgca cacctggg 3660
 cgtgcagggc tcagctcggc agcagctctg agggcagctc aatgaaaaag tgaatgcaca 3720
 cgcccttggt ggctggccct ggcatggcct ggtgctatcg gcagccgctc tccactccc 3780
 gactgatact caattacgtg aagccaagaa agatgatctt tagaaccttt gcctatatta 3840
 ggttgactt atgtacatat ttgcagtggt ttcacaggag aaagtggcct taactgccc 3900
 ttattctctc tccacgttgt aaataaacat gtgtttaata caagttaaag ctatgtatga 3960
 aaactcagaa cttgaatccc gtcagcttaa aacttggtga gggaaatcctg acttttaaaa 4020
 tgtgagggga tttggatctg tgtgaaagt cgtatatctt tatctgtggt gtgctgagt 4080
 caggccacca gctcctaaat agagggtccc tatatgcggt tatgacatgg tgaataaaca 4140
 caactctctc cactcaggac atccggagcg ttatggacgt ggtaggtggt cgttctgtgt 4200
 gcttggtgaa gtgtccaggc gtgtgcacag ccagtgcgcc cacttccggg ctcttgcctc 4260
 cctgctgtac tgaagtcttg gatcttgcat ccaatcctgt gtgcctgccc ttctgccgaa 4320
 ggcttggtgag gggcctgagt cctctgccc tcaggatgac aggtccttc ctgcagggcc 4380
 ataggagggg agttttggaa acacagaatg attccaaggt gctctcgctt ctgaggggga 4440
 ctggtttgta acccatgaca tctgtgggag agagaggcag ctgggagcag gacacttgga 4500
 gggtcacccc acgggggtgg cacctgcact ctgagtgcc cccactgtca tcagctgcct 4560
 cttaccgtgg acacagtctt gggtttgggg actagggggc cccactcctg gtggtaccgt 4620
 ttggacttac tagggcagtg ggacatatag gccggggcta gtgggataac ggggagttac 4680
 gcctgatgac ttttttgatg gaatcctgca ttagatagct ggtgggacct cccctcaga 4740
 attgggggaa tgaggagact ccaggagggt tgccttcca gggagagcag ctatgagggg 4800
 cccctagct tcctgtgcct ggaagtaaga gaaccagtaa agggccatac acacctgtac 4860
 ccaagagacc gctctccatt tgctttcttt tttactaaa taattgtaa atattattat 4920
 gacataaaga accatttaag gcc 4944

144

<210> 99
 <211> 438
 <212> DNA
 <213> Homo sapien

<400> 99
 gcctactact actaaattcg cggccgcgctc gaccttcttg aactgggtgct gtctgggctt 60
 catagcattc gcctactccg tgaagtctag ggacaggaag atgggtggcg acgtgaccgg 120
 ggcccaggcc tatgcctcca ccgccaagtg cctgaacatc tgggccctga ttttgggcat 180
 cttcatgacc ggattcatcc tgttactggt attcggtctc gtgacagtct accatattat 240
 gttacagata atacaggaaa aacgggggta ctagtagccg cccatagcct gcaacctttg 300
 cactccactg tgcaatgctg gccctgcacg ctggggctgt tgcccctgcc cccttgggtcc 360
 tgcccctaga tacagcagtt tatacccaca cacctgtcta cagtgtcatt caataaagtg 420
 cacgtgcttg tgaaaaar 438

<210> 100
 <211> 450
 <212> DNA
 <213> Homo sapien

<400> 100
 agattaatat atagggcaat tggatcatcta atcatgctcg agcggcgcag tgtgatggat 60
 yggycgcgcg scgaggtacg tgaaacaaa attaagggtg aaagtgggag attcttcaca 120
 gtcaagctcc cagttgctct tgatcctggg gccaaagattt cagtcattgt ggaaacagtc 180
 tacacccatg tgcttcatcc atatccaacc cagatcaccg agtcagagaa acagtttgtg 240
 gtgtttgagg ggaaccatta tttctactct ccctatccaa cgaagacaca aaccatgcgt 300
 gtgaagcttg cctctcgaaa tgtggagagc tacaccaagc tggggaaacc cacgcgtctc 360
 gaggacctac tggattatgg gcctttcaga gatgtgcctg cctatagtca ggatactttt 420
 aaagtacctc ggccgcgacc acgctaagcc 450

<210> 101
 <211> 1965
 <212> DNA
 <213> Homo sapien

<400> 101
 agcggaatga acggctgctc agtggcgagg gggcgggcta ccgcgcccgg gccctacccg 60
 ccctggcgca ctgctcttcc cggatcatga ggcgccagcc gccggcttgt ttctgctcct 120
 gttgcttggg acttggggcc cggcgccggg cagcgctctc tccgaggcac cgccgctgat 180
 caatgaggac gtgaagcgca cagtggacct aagcagccac ctggctaagg tgacggccga 240

145

ggtggtcctg gcgcacctgg gcggcggctc cagtcctcga gctacctctt tcttgctggc 300
 tttggagcct gagctcgagg cccggctggc gcacctgggc gtgcaggtaa agggagaaga 360
 tgaggaagag aacaatttgg aagtacgtga aacaaaaatt aagggtaaaa gtgggagatt 420
 cttcacagtc aagctcccag ttgctcttga tcttggggcc aagatttcag tcattgtgga 480
 aacagtctac acccatgtgc ttcattcata tccaaccag atcaccagc cagagaaaca 540
 gtttgtgggtg tttgagggga accattatct ctactctccc tatccaacga agacacaaac 600
 catgctgtg aagcttgctc ctcgaaatgt ggagagctac accaagctgg ggaacccac 660
 gcgctctgag gacctactgg attatgggcc ttccagagat gtgcctgcct atagtcagga 720
 tacttttaaa gtacattatg agaacaacag ccttttctct accatcacca gcatgacctg 780
 agtcattgaa gtctctcact ggggtaatat tgctgtggaa gaaaatgtgg acttaaagca 840
 cacaggagct gtgcttaagg ggcccttctc acgctatgat taccagagac agccagatag 900
 tggaatatcc tccatccgtt cttttaagac catccttctt gctgctgccc aggatgttta 960
 ttaccgggat gagattggca atgtttctac cagccacctc cttatttttg atgactctgt 1020
 agagatggaa atccggcctc gcttccctct ctttggcggg tggaagacct attacatgt 1080
 tggctacaac ctcccaagct atgagtacct ctataatttg ggtgaccagt atgcactgaa 1140
 gatgagggtt gtggaccatg tgittgatga acaagtata gattctctga ctgtgaagat 1200
 catcctgcct gaaggagcca agaacattga aattgatagt cctatgaaa tcagocgtgc 1260
 cccagatgag ctgcactaca cctatctgga cacatttggc cgccctgtga ttgttgccca 1320
 caagaaaaat ctggtagaac agcacattca ggacattgtg ctggatgcac aggtcaagga 1380
 gctggtgctg aagtcggcgg tggaggetga gcgcctgggt gctggcaagc tcaagaaaga 1440
 cacgtacatt gagaatgaga agctcatctc aggaaagcgc caggagctgg tcaccaagat 1500
 cgaccacatc ctggatgccc tgtagccctt gcccgcatcc tccagggggc ccagggtgccc 1560
 tgcactttgc tgtggcaggc agattgggtg gtagtgggag gttgtgcatg gaggccagt 1620
 aaagctgaca tctgtaaaag gccttcaagg aagagaaacc aggccttgcg tcaggcagt 1680
 tgagtttgcc gtttgcctt aactttcttt tttttttttt ttaaaaaaag aaaactttta 1740
 aaaaactccc attaaaaaca aaacatcttt gtgttttgaa caaaggaatt ttcaatattt 1800
 gattgggtatt ctgttctgaa gtctaggata tttttcagcc tataaagccc cctgttttat 1860
 gcccttctaa ttctgatgtt tgggtattgt gtgagtgcac gtgttttttt tttttttttt 1920
 taaagcgtgt gtgaacaaat ggaaataaag cagggactgt gaaca 1965

<210> 102

<211> 1193

146

<212> DNA

<213> Homo sapien

<400> 102

```

agcgggaatga acggctgctc agtggcgggga gggcggggcta ccgcgcccgg gccctacccg      60
ccctggcgca ctgctcttcc cggtcatgga ggcgccagcc gccggcttgt ttctgctcct      120
gttgcttggg acttggggcc cggcgccggg cagcgccctcc tccgaggcac cgccgctgat      180
caatgaggac gtgaagcgca cagtggacct aagcagccac ctggctaagg tgacggccga      240
ggtagtcctg gcgcacctgg gcggcgggctc cacgtcccga gctacctctt tcctgctggc      300
tttgagacct gagctcgagg cccggctggc gcacctgggc gtgcaggtaa agggagaaga      360
tgaggaagag aacaatttgg aagtacgtga aacaaaaatt aagggtaaaa gtgggagatt      420
cttcacagtc aagctcccag ttgctcttga tcctggggcc aagatttcag tcattgtgga      480
aacagtctac acccatgtgc ttcattcata tccaaccag atcaccagt cagagaaaca      540
gtttgtggtg tttgagggga accattattt ctactctccc tatccaacga agacacaaaac      600
catgctgtg aagcttgctc ctcgaaatgt ggagagctac accaagctgg ggaacccac      660
gcgctctgag gacctactgg attatgggcc ttccagagat gtgcctgctc atagtcagga      720
tacttttaaa gtacattatg agaacaacag ccctttcctg accatcacca gcatgacccg      780
agtcattgaa gtctctcact ggggtaatat tgctgtggaa gaaaatgtgg acttaaagca      840
cacaggagct gtgcttaagg ggcctttctc acgctatgat taccagagac agccagatag      900
tggaatatcc tccatccgtt cttttaagac catccttctc gctgctgccc aggatgttta      960
ttaccgggat gagattggca atgtttctac cagccacctc cttatttttg atgactctgt      1020
agagatggaa atccggcctc gcttccctct ctttggcggg tggaagacc attacatcgt      1080
tggtacaac ctccaagct atgagtacct ctataatttg ggtcagtcct caatagtaag      1140
ggagaaacta accttttctt taatttcgtg aatttttttt ctttcaatta tca      1193

```

<210> 103

<211> 1685

<212> DNA

<213> Homo sapien

<400> 103

```

agcgggaatga acggctgctc agtggcgggga gggcggggcta ccgcgcccgg gccctacccg      60
ccctggcgca ctgctcttcc cggtcatgga ggcgccagcc gccggcttgt ttctgctcct      120
gttgcttggg acttggggcc cggcgccggg cagcgccctcc tccgaggcac cgccgctgat      180
caatgaggac gtgaagcgca cagtggacct aagcagccac ctggctaagg tgacggccga      240
ggtagtcctg gcgcacctgg gcggcgggctc cacgtcccga gctacctctt tcctgctggc      300

```

147

```

tttggagcct gagctcgagg cccggctggc gcacctgggc gtgcaggtaa agggagaaga 360
tgaggaagag aacaatttgg aagtacgtga aacccaaatt aagggtaaaa gtgggagatt 420
cttcacagtc aagctcccag ttgctcttga tcctggggcc aagatttcag tcattgtgga 480
aacagtctac acccatgtgc ttcattccata tccaaccag atcaccagc cagagaaaca 540
gtttgtggtg tttgagggga accattatct ctactctccc tatccaacga agacacaaac 600
catgctgtg aagcttgcc ctcgaaatgt ggagagctac accaagctgg ggaacccac 660
gcgctctgag gacctactgg attatgggcc ttccagagat gtgcctgcct atagtcagga 720
tactttttaa gtacattatg agaacaacag ccctttcctg accatcacca gcatgacccg 780
agtcattgaa gtctctcact ggggtaatat tgctgtggaa gaaaatgtgg acttaaagca 840
cacaggagct gtgcttaagg ggcctttctc acgctatgat taccagagac agccagatag 900
tggaatatcc tccatccgtt cttttaagac catccttcc tctgctgccc aggatgttta 960
ttaccgggat gagattggca atgtttctac cagccacctc cttattttgg atgactctgt 1020
agagatggaa atccggcctc gcttccctct ctttggcggg tggaagacc attacatcgt 1080
tggtacaaac ctccaagct atgagtacct ctataatttg ggtgaccagt atgcactgaa 1140
gatgagggtt gtggaccatg tgtttgatga acaagtata gattctctga ctgtgaagat 1200
catcctgcct gaaggagcca agaccacatc ctggatgccc tgtagccct gcccgcatcc 1260
tccagggggc ccagggtgcc tgcactttgc tgtggcaggc agattgggtg gtagtgggag 1320
gttgtgcatg gagggcagtg aaagctgaca tctgtaaaag gccttcaagg aagagaaacc 1380
aggccctgog tcaggcagtg tgagtttgcc gtttgcctt aactttcttt tttttttttt 1440
ttaaaaaaag aaaacttta aaaaactccc attaaaaaca aaacatcttt gtgttttgaa 1500
caaagggaatt ttcaatatat gattggtatt ctgttctgaa gtctaggata tttttcagcc 1560
tataaagccc cctgttttat gcccttctaa ttctgatgtt tgggtattgt gtgagtgcac 1620
gtgttttttt tttttttttt taaagcgtgt gtgaacaaat ggaaataaag cagggactgt 1680
gaaca 1685

```

<210> 104
<211> 1182
<212> DNA
<213> Homo sapien

```

<400> 104
gggttgccgc agggagccgg aaagccgact cccgaagttg gggtcctggg aaaacttggg 60
tcctgggttg actgagaagc ggcggggaaa ggaggcgggc caggaggagg gggcctggcg 120
gacgccggcc gggggggcgg gcggggcggg gctgtcggtc acgcccctca gtccgccccg 180

```

148

```

ccccgccccg cctgccgggg aaggsgccaag ttgccccgcc ggccgtccgg ccccggcgcg 240
ccgcagaaaag ggctggcgag tcgaaaggcg aggcggccgc ggcagcgctt gggacgcgcc 300
tgggcaccgg gctcgctccc tgcgccccgg agcaggccaa gttcggggcc aggacgtcgg 360
gaggacctgg tgcattggctg cctcctaata ccatagtcca gaggaggcat ccctaggact 420
gcgggcaagg gagccgggca agcccagggc agccttgaac cgtcccctgg cctgccctcc 480
ccggtggggg ccaggatgct gaagaagcag tctgcagggc ttgtgctgtg gggcgtatc 540
ctctttgtgg cctgatacta accaaagggg ctctcctgtc agggcctggg ggagtgggtg 600
gggtcatcggg gctcactgcc tcttgcctt ctctcctgtc tgacccccac ttagcccttc 660
tctccttgca gcctagcagt ttatagttct gagatggaaa gttgaagggg gcaagcaaga 720
cctctcctca gcccatgccc agctgtcagg agagaggtgc agggagggaag gccttgtgct 780
gggacaacct ctctcttgcc ttacctcaga gagggactat gccctgacct ctctttcttg 840
aaaatcagtg ccctccctgt tgctctagga ggctcctgct ggcttggtag aagacagaat 900
tcgatctgcc tgtccctttt tcccctgggg ttgacacac aggtcctct cagcatgagg 960
tgaggcagtg accagggtgga gcagtgaaca ggacgcctct ggcccagtgc tgccagcct 1020
ccccgcccgc tcccaggcgc cccatgtcct cacaggccag gacgccatgg caggatggag 1080
aggacttggg ggatttttgc ttcttgccctg acctcagttt catgaaagaa agtgggaagct 1140
acagaattat tttctaaaat aaaggctgaa ttgtctgaaa aa 1182

```

<210> 105

<211> 2645

<212> DNA

<213> Homo sapien

<400> 105

```

agcgggcgcg ctccgctcgg cagcctgtgg gacgcgaccg cggcgctagt ctcttccctt 60
tgtgctgcgg cggcggcttc tcgagtcttc cccgacgcgt cctctaggcc agcgagcccc 120
gcgctctccg gtgacggacc atgtcggcgg cgggagcggg cgcgggcgta gaggcgggct 180
tctccagcga ggagctgtc tcgctccgtt tcccgtgca ccgcgcctgc cgcgacgggg 240
acctggccac gctctgtctg ctgctgcagc agacacccca cggccacctg gcctctgagg 300
actccttcta tggctggacg cccgtgcact gggccgcgca ttctggcaag ttggagtgtc 360
tagtgcagtt ggtgagagcg ggagccacac tcaacgtctc caccacacgg tacgcgcaga 420
cgccagccca cattgcagcc ttggggggac atcctcagtg cctgggtctgg ctgattcaag 480
caggagccaa cattaacaaa ccggattgtg agggtgaaac tccattcac aaggcagctc 540
gctctgggag cctagaatgc atcagtgcct ttgtggcgaa tggggctcac gtcgacctga 600

```


149

gaaatgccag	tggcctgaca	gcagcagaca	ttgcacaaac	ccagggtttc	caagagtgtg	660
cccagtttct	cttgaacctc	cagaattgtc	atctgaacca	tttctataac	aatggcatct	720
taaatggggg	tcatacagaat	gtatttccta	atcatattag	tgtgggaaca	aatcgaaaga	780
gatgcttggg	agactcagaa	gactttggag	taaagaaagc	tagaactgaa	gctcaaagct	840
tggattctgc	cgtgccactc	acgaatggcg	acacagaaga	cgatgctgac	aaaatgcacg	900
ttgataggga	gtttgctgtt	gtaacaggtg	ggagtggaca	gtttcctgtt	agctgcaaca	960
acaatccaat	ggttgaagac	accaaacagc	aggagagtgg	ttctgttggg	ccaaaagaaa	1020
tagaaatata	tactgtgtca	gcaatgcaga	ccccctgtcg	ttgcaggaat	caatatgaaa	1080
aacagtagct	ccgtatcgaa	tacattgaca	aatggatgtg	tcataaatgg	acatttggac	1140
ttccccctcca	cgaccccgct	cagtgggatg	gaaagcagga	atggccagtg	cttgacagga	1200
actaacggaa	ttagcagtgg	attagcccca	ggacagccgt	ttccgagtag	ccagggttct	1260
ctctgcatta	gtgggactga	ggagccagag	aagaccctga	gagctaacco	tgagtgtgtc	1320
ggttctctgc	acctgaacgg	gagccaagt	agctgcatag	ccagtaggcc	ttcctgggtg	1380
gaagacattg	gggataacct	gtactatgga	cactaccacg	ggtttgggga	cactgctgaa	1440
agcatcccag	aactgaacag	tgtggtcgag	cattccaagt	ccgtgaaggt	gcaggagcgg	1500
tacgacagtg	ccgtgctggg	caccatgcac	ctgcaccaag	gctcctagag	acgtgacct	1560
ggctctcgga	aacgcaggag	tccttctctg	tagccagctc	agaataccca	tgtagcagca	1620
acttgaacga	atgtcacaac	ttgtactttt	tttatatact	tcaactttct	gaaaaagtaa	1680
acttcgacaa	gttcccagca	actgcttgtt	tgtgcatgag	tagggcttac	taagtgcata	1740
gatgtttcta	cagtgaggtg	tcctttttat	aagggtgact	tttggagttt	ttctgatgcc	1800
aatctcaaca	ttgtcttttt	aatactgtca	ccagatatgt	ccatttttct	ttttgttaaa	1860
agattatatg	atcaagataa	attgggtggg	taaatcaggt	gcctggtaat	ttatctcttt	1920
gcacatgggc	atcattttta	aaagcttgct	tccactcttt	tctgtagaat	ttgacggaac	1980
acagctattt	ccctatgcaa	ggtacagcct	tacaaagatt	tctgcagtga	tttgtgtgaa	2040
gaagagaatg	tttgtctttt	tcaatgaagc	tttgcagatc	accatgtggg	tgaaggtttt	2100
agttgtggac	acagtgggtc	ctccttaatg	atgaagatca	ctgccttggg	cttcatggaa	2160
aacaggccca	gcctggggct	gcgtttggat	ttattgtttt	tattccacac	ttcctacttg	2220
gtctctggaa	gttttaccac	atgtaacaga	ttcctttata	tgtagtgaag	atcactattt	2280
gtagaaaactg	tcaggatcaa	atatttaact	gactgttgac	atgtattttc	ttttttcctt	2340
gtttttgttt	tttgggggtt	tctgctttta	gatataatcc	actatgtata	tccagttaac	2400
tgagagaatt	ttgactctct	taataaaaact	gcattaagtt	tttgattttg	tagaaattag	2460

150

cttttgtcta ggcaactagt ggttatactc tgcaaatatt gtaatgaatt ttactttttt 2520
 tgatttttgt aataaaaaatt ggtgcagata aaatgtcaaa tgaacaaacc agtgttctaa 2580
 gagtggttact aacattttgt tctaaaactg tccttcacaa attgaataaa aaactctcac 2640
 actca 2645

<210> 106
 <211> 2439
 <212> DNA
 <213> Homo sapien

<400> 106
 gcgcgcgcac gttagggttaa tccatttttc tgtttgtttc tgaattgctt tggagaaggc 60
 aactcagact ccaaggaata caacagctgc cgtgtgaagc tttctctact tttccagtgg 120
 tcgtagcagg aacagcgtct tgacctcaca tcagtgaagt gaaaagagct gagtttgaag 180
 tgcattattg tcctccataa agaattgtgt tatgtgctgt ttttttaatt aagtctggta 240
 atttatttga tacatgtatt gtagtttttag ttgaattaaa ctagttagta aaactgttgg 300
 tgaggtagtg tttcagttac tctgtagata agctcttttg ttaaaacctc ttaagttttt 360
 tgttcctgaa tatgttacia acatctatct tctcttactg tagctatcac atgaggaaaa 420
 aaacttgaaa aaaagacttc atagtgtgtg tttatgtttg attttagaag acccttttga 480
 ggacttcttt gggaatcgaa ggggtccccg aggaagcaga agccgagggg cggggtcggt 540
 tttctctgag ttcagtggat ttccgtcttt tggaagtggg tttctctctt ttgatacagg 600
 atttacttca tttgggtcac taggtcacgg gggcctcact tcattctctt ccacgtcatt 660
 tgggtgtagt ggcatgggca acttcaaact gatatacaact tcaactaaaa tggttaatgg 720
 cagaaaaatc actacaaaga gaattgtcga gaacggtcaa gaaagagtag aagtgaaga 780
 agatggccag ttaaagtcct taacaataaa tgggtgtggc gacgacgatg cctcgcgtga 840
 ggagcgcag cggagaggcc agaacgccct gccagcccag cctgccggcc tccgcccgcc 900
 gaagccgccc cggcctgcct cgctgctgag acacgcgcct cactgtctct ctgaggagga 960
 gggcgagcag gaccgacctc gggcaccggt gccctgggac cccctcgcgt ccgcagcagg 1020
 attgaaagaa ggtggcaaga ggaagaagca gaagcagaga gaggagtcga agaagaagaa 1080
 gtcgacaaa ggcaatcact agaccgact tgaggcacgc ggtgcacccc cagacgctgg 1140
 cgctccaccg tgctcggcat gcggctgtgc acacgcgcta ggtagcagcg tcggtcagga 1200
 ctgtctcgag gccacactcg ctccggcagg ttatgcgac acggatcagt cagagcaggg 1260
 tcaggagacg gggctgacgg caccgggtggc ggggacagac gtttgggact tggccgcgac 1320
 tctctgcttc tctccagctc tcaatctgct gcattttcct ctagtgtctc cggatcctct 1380

151

tcattctttt cggctactca accactccgc atgctgctgg aatattttctg gcttttagaag 1440
 tacaggaggg cgcagatggc taactgagta acattcatga aatgaggctt tctgtggcgg 1500
 cgtagtgttt ggaattagaa ggtaattcag tagagtgtaa cttagagaat attgcaagtg 1560
 acacattgaa tcttgcccggt cagggcacct ttctctcaga gcaatccggc cacacgaata 1620
 gaaggctgtc gtgaatcaca tcagatgtaa aatcattcct tctgtttact cttttaattt 1680
 tcatcctttg caggtagtgc aaattcaact tcaaataatgg tgtaggtttt gctagattcc 1740
 atattttttt cttggatttt tgctaattat ttttagcaaa aaatttttgc tcagtggcac 1800
 cctccctagt gtccatgggt tagggccatg ctggggaaaa cgggccggta ttacacacg 1860
 cgcaaacac ccagagacgg cacaaggagg ttgaactcat gtttcagttc gcgaacattg 1920
 actccttacg aaagtcactt cattctaact agatgcgccc acttcgggtc attatttcgt 1980
 ttgcatgatg tattgcttct tcacgttttg tttttattga gcacggagta gaattccagg 2040
 gctgccttga cttcttccct gcatgctccc tcccagtgac ttctcttccc ttccacatga 2100
 ggatctgcg ttcatgttgc tttctccttt gtctctcttg acttgagggc attgtgaaaa 2160
 gctttgctgt gatttaaaaa tcccagcaat ttaaatctag cagtgttgaa gctgggaatt 2220
 ttttggcgca atccatgtag cagtgaacca ggcttgggag ccagaaacaa gtgtgacctg 2280
 ggattttatt taacacaact gttgccaag agttggcttt gtttatbttg ttttggcggg 2340
 gagaggagtg gtaattgatg ctttctgtgg acaatgtaac cctaaacaca tcatgtattt 2400
 taaatgccac ctacataaat aaaacataag catattgaa 2439

<210> 107
 <211> 1958
 <212> DNA
 <213> Homo sapien

<400> 107
 ggcagggcct caggcccca agagggtgt gagcaggcac cttcctgtga ggcacgatgc 60
 caccatgtga agttgtgtgg gtctttggag agttctggca ggttgagggc ctgtgcgtgt 120
 gggacccagg cctgccctgc ctgctgccgg ccatgttccc tctgccagt catgttgaca 180
 attgtggcca aattcaacat cgggcctgtt tcctgcaccc acgttggcac aactgagtt 240
 caagacagtt tctgcagaaa tgaatccaga ggtgtttatt tctggcacgt tggatcagac 300
 gttcagaggg tgggcgtctt tctccatgca cttcagctgg atcagtcagt gtcagccatt 360
 gacttttagca acagggaat gaaagacttt cctcaataag aaatgggact ttctcacgct 420
 ggatggcaca gagctggcaa acatgaggcc agtccacacc aaggctttgc ctgcagaaag 480
 gctgcactgt ggccagcggg ggaagcggag gagacacctg tggacaccct cccacagga 540

152

```

ttgaaagaag gtggcaagag gaagaagcag aagcagagag aggagtcgaa gaagaagaag      600
tcgaccaaag gcaatcacta gaccggactt gaggcacgcg gtgcaccccc agacgctggc      660
gctccaccgt gctcggcatg cggtcgtgca cagcgcctag gtagcagcgt csggtcaggac      720
tgtctcgagg ccacactcgc tcggcaggat tatgcgatca cggatcagtc agagcagsgt      780
caggagacgg ggctgacggc acgggtggcg gggacagacg tttgggactt ggccgcgact      840
ctctgcttct ctccagctct caatctgctg ctttttcctc tagtgcttcc ggatcctctt      900
cattcttttc ggctactcaa ccactccgca tgctgctgga atatttctgg ctttagaagt      960
acaggagggc gcagatggct aactgagtaa cattcatgaa atgaggcttt ctgtggcggc     1020
gtagtgtttg gaattagaag gtaattcagt agagtgtaac ttagagaata ttgcaagtga     1080
cacattgaat cctgcccgtc agggcacctt ttcctcagag caatccggcc acacgaatag     1140
aaggctgtcg tgaatcacat cagatgtaaa atcattcctt ctgtttactc ttttaatttt     1200
catcctttgc aggtagtgc aattcaactt caaatatggt gtaggttttg ctagattcca     1260
tatttttttc ttggattttt gctaattatt tttagcaaaa aatttttgct cagtggcacc     1320
ctccctagtg tccatgggtt agggccatgc tggggaaaac gggccggtat ttacacacgc     1380
gcaaaacacc cagagacggc acaaggaggt tgaactcatg tttcagttcg cgaacattga     1440
ctccttacga aagtcacttc attctaacta gatgcgcca cttccggtca ttatttcgtt     1500
tgcattgatg attgcttctt cacgttttgt ttttattgag cacggagtag aattccaggg     1560
ctgccttgac ttcttccctg catgctccct ccagtgact ttccttccct ttcacatgag     1620
gatctgccgt tcatgttgct ttctcctttg tcctcttgga cttgagggca ttgtgaaaag     1680
ctttgctgtg atttaaaaat gccagcaatt ttaattcagc agtggtgaag ctgggaattt     1740
tttggcgcaa tccatgtagc agtgaccag gcttgggagc cagaaacaag tgtgacctgg     1800
gattttattt aacacaactg ttgccaaaga gttggctttg tttatttggg tttggcgggg     1860
agaggagtgg tatttgatgc tttctgtgga caatgtaacc ctaaacacat catgtatttt     1920
aatgccacc tacataaata aaacataagc atattgaa                                1958

```

<210> 108

<211> 3400

<212> DNA

<213> Homo sapien

<400> 108

```

ccgccccgtc gcgccagcgt gcggagaaac ctggcgccgc gaccagtgtg tcgggggtct      60
tggaatggc taagaaagct ggcctctgcc taggaggctc tcggcagggg ggctgccaat      120
ccgggatggg taccggaaat gaaccgcgcg atctggocct ttcacacca cttagctttg      180

```

taggggggttt gtagtcttta caggacaaaa gggcacctat tccagagcac accccctttt 240
cttcctctcc cttctgtgcc tcaactgcttt ccatctcat agttgctccc agtaagtgt 300
ccaaagtcgt gtggggccgc atctgaggtc tgcccgcctg aattgggttg gaggggttca 360
tgttctgaga aggcgaaggc cagggtgtag gatggtgccc cgtgactttc cagtctttgt 420
aggcgtgcct ggtatcttca tcgtaatagc agagtcgtca actttctatg aaagggtggt 480
ttacctgat aggtggtagt ggtggcctaa tttgtatcat tgtcatgggt ttagtttcca 540
tattctagtt agcagctgct actgttctct tgcaagtgt taatgtgaaa taataaacgt 600
gaagacttct gaataagggt attctgtgtc tttcatagta gaaaccttaa tgatcgggtc 660
gttgtagtga aactctttaa aaaggcgcta tagaaaacca atttctgagt aaaccagcag 720
acagcatgac ttgtaaatgg tcttttaatt aattaaaaag aaattagtca gctacaagca 780
tgaacatgtg gaacgcttac ctttgtacta ggcgtttttg tttttgtttt aatggctttt 840
ggaatattat agtattaaca tctggaaaac taggtaaatt tatcttagaa ttaagttttt 900
tgctcctttt ttgcagaaaa agaacagcaa gaagcgattg aacacattga tgaagtacaa 960
aatgaaatag acagacttaa tgaacaagcc agtgaggaga ttttgaaagt agaacagaaa 1020
tataacaaac tccgccaacc attttttcag aagaggtcag aattgatcgc caaaatccca 1080
aatttttggg taacaacatt tgtcaaccat ccacaagtgt ctgcactgct tggggaggaa 1140
gatgaagagg cactgcatta tttgaccaga gttgaagtga cagaatttga agatattaaa 1200
tcaggttaca gaatagattt ttattttgat gaaaatcctt actttgaaaa taaagttctc 1260
tccaaagaat ttcatctgaa tgagagtggg gatccatctt cgaagtccac cgaaatcaaa 1320
tggaaatctg gaaaggattt gacgaaacgt tcgagtcaaa cgcagaataa agccagcagg 1380
aagaggcagc atgaggaacc agagagcttc tttacctggg ttactgacca ttctgatgca 1440
ggtgctgatg agttaggaga ggtcatcaaa gatgatattt ggccaaaccc attacagtac 1500
tacttggttc ccgatatgga tgatgaagaa ggagaaggag aagaagatga tgatgatgat 1560
gaagaggagg aaggattaga agatattgac gaagaagggg atgaggatga aggtgaagaa 1620
gatgaagatg atgatgaagg ggaggaagga gaggaggatg aaggagaaga tgactaaata 1680
gaacactgat ggattccaac cttccttttt ttaaattttt tccagtcctt gggagcaagt 1740
tgcagtcttc tttttttttt tttttttttt cctctctgtg ctcagtcgcc ctgttcttga 1800
ggctcttttc ctctactcca tgggtctcaa tttatttggg gggaaatacc ttgagcagaa 1860
tacaatggga aaagagtctc tacccttttc tgttcgaagt tcatttttat cccttcctgt 1920
ctgaacaaaa actgtatgga atcaacacca ccgagctctg tgggaaaaaa gaaaaacctg 1980

154

```

ctcccttcgc tctgctggaa gctggagggg gctaggcccc tgtgtagtag tgcatagaat 2040
tctagctttt ttccctcctt ctctgtatat tgggctcaga gactacactg tgtctctatg 2100
tgaatatgga cagttagcat ttaccaacat gtatctgtct actttctctt gtttaaaaaa 2160
agaaaaaaaa acttaaaaaa atggggttat agaaggtcag caaagggtgg gtttgagatg 2220
tttgggtggg ttaagtgggc attttgacaa catggcttct cctttggcat gtttaattgt 2280
gatatttgac agacatcctt gcagtttaag atgacacttt taaaaataat tctctcctaa 2340
tgatgacttg agccctgcc aacaatggga gaatcagcag aacctgtagg atcttatttg 2400
gaattgacat tctctattgt aattttgttc ctgtttattt taaaattttt tttttgtttc 2460
actggaaagg aaagatgatg ctgagtttta aacgttaaaa gtgtacaagt tgctttgtta 2520
caataaaact aaatgtgtac acaaaggatt tgatgctttt ctctcagcat aggtatgctt 2580
actatgacct tccaagtttg acttgataa catcactgtc aaactttgtc accctaactt 2640
cgtatttttt gatagcact ttgcaggatg acctcagggc tatgtggatt gagtaatggg 2700
atltgaatca atgtattaat atctccatag ctgggaaacg tgggttcaat ttgccattgg 2760
tttctgaaag tattcacatc atttgggata ccagatagct caatactctc tgagtacatt 2820
gtgcccttga tttttatctc caagtggcag tttttaaaat tggcctttta cctggatata 2880
aattaattgt gcctgccacc accatccaac agacctgggt ctctaattgcc aagttataca 2940
cgggacagtt gctggcatgt cttcattggc tatataaaat gtggccaaga agataggctc 3000
tcagtaagaa gtctgatggt gagcagtaac tgtccctgct ttctgggtata aagctctcaa 3060
atgtgaccat gtgaatctgg gtgggataat ggactcagct ctgtctgtct aatgccattg 3120
tgcagagaag caccctaatt cataagcttt ttaatgctgt aaaatatagt cgctgaaatt 3180
aaatgccact ttttcagagg tgaattaatg gacagtctgg tgaacttcaa aagctttttg 3240
atgtataaaa cttgataaat ggaactattc catcaatagg caaaagtgt acaacctatc 3300
tagatggata gtatgtaatt tctgcacagg tctctgttta gtaaatacat cactgtatac 3360
cgatcaggaa tcttgctcca ataaaggaac ataaagattt 3400

```

<210> 109

<211> 2775

<212> DNA

<213> Homo sapien

<400> 109

```

ccgccccgtc gcgccagcgt gcggagaaac ctggcgccgc gaccagtgt tgggggtct 60
tggaaatggc taagaaagct ggctctgcc taggaggctc tcggcagggg ggctgccaat 120
ccgggatggg taccggaaat gaaccgcgcg atctggccct ttcacacca cttagctttg 180

```

155

taggggggttt gtagtcttta caggacaaaa gggcacctat tccagagcac accccctttt	240
cttcctctcc cttctgtgcc tcaactgctt cccatctcat agttgctccc aaaaaagaac	300
agcaagaagc gattgaacac attgatgaag tacaaaatga aatagacaga cttaatgaac	360
aagccagtga ggagattttg aaagtagaac agaaatataa caaactccgc caaccatttt	420
ttcagaagag gtcagaattg atcgccaaaa tcccaaattt ttgggtaaca acatttgtca	480
accatccaca agtgtctgca ctgcttgggg aggaagatga agaggcactg cattatttga	540
ccagagttga agtgacagaa tttgaagata ttaaatcagg ttacagaata gatttttatt	600
ttgatgaaaa tccttacttt gaaaataaag ttctctccaa agaatttcat ctgaatgaga	660
gtggtgatcc atcttcgaag tccaccgaaa tcaaatggaa atctggaaag gatttgacga	720
aacgttcgag tcaaacgcag aataaagcca gcaggaagag gcagcatgag gaaccagaga	780
gcttctttac ctggtttact gaccattctg atgcagggtc tgatgagtta ggagaggcca	840
tcaaagatga tatttggcc aaccatttac agtactactt ggttcccgat atggatgatg	900
aagaaggaga aggagaagaa gatgatgatg atgatgaaga ggaggaagga ttagaagata	960
ttgacgaaga aggggatgag gatgaagggtg aagaagatga agatgatgat gaaggggagg	1020
aaggagagga ggatgaagga gaagatgact aaatagaaca ctgatggatt ccaaccttcc	1080
tttttttaaa ttttctccag tccctgggag caagtgcag tctttttttt tttttttttt	1140
tttttccctc ttgtgctcag tcgcctgtt cttgagggtc cttttctcta ctccatgggt	1200
ctcaatttat ttggggggaa ataccttgag cagaatacaa tgggaaaaga gtctctaccc	1260
ctttctgttc gaagttcatt tttatccctt cctgtctgaa caaaaactgt atggaatcaa	1320
caccaccgag ctctgtggga aaaaagaaaa acctgctccc ttcgctctgc tggaaagctgg	1380
aggggtgctag gccctgtgt agtagtgc atgaattctag cttttttcct cttttctctg	1440
tatatggggc tcagagagta cactgtgtct ctatgtgaat atggacagtt agcatttacc	1500
aacatgtatc tgtctacttt ctcttgttta aaaaaagaaa aaaaaactta aaaaaatggg	1560
gttatagaag gtcagcaaag ggtgggtttg agatgttttg gtgggttaag tgggcatttt	1620
gacaacatgg cttctccttt ggcatgttta attgtgatat ttgacagaca tccttgcaat	1680
ttaagatgac acttttataaa taaattctct cctaagatg acttgagccc tgccactcaa	1740
tgggagaatc agcagaacct gtaggatctt atttggaatt gacattctct attgtaattt	1800
tgttctgtt tattttttaa ttttctttt gtttctactg aaaggaaaga tgatgctcag	1860
ttttaaacgt taaaagtga caagtgtctt tgttacaata aaactaaatg tgtacacaaa	1920
ggatttgatg cttttctctc agcataggta tgcttactat gaccttccaa gtttgacttg	1980
tataacatca ctgtcaaact ttgtcacctt aacttcgtat tttttgatac gcactttgca	2040

156

ggatgacctc agggctatgt ggattgagta atgggatttg aatcaatgta ttaatatctc 2100
 catagctggg aaacgtgggt tcaatttgcc attggtttct gaaagtattc acatcatttg 2160
 ggataccaga tagctcaata ctctctgagt acattgtgcc cttagattttt atctccaagt 2220
 ggcagttttt aaaattggcc ttttacctgg atataaatta attgtgcttg ccaccaccat 2280
 ccaacagacc tgggtgctcta atgccaagtt atacacggga cagttgcttg catgtcttca 2340
 ttggctatat aaaatgtggc caagaagata ggctctcagt aagaagtctg atggtgagca 2400
 gtaactgtcc ctgctttctg gtataaagct ctcaaatgtg accatgtgaa tctgggtggg 2460
 ataatggact cagctctgtc tgctcaatgc cattgtgcag agaagcacc ctaatgcataa 2520
 gctttttaat gctgtaaaat atagtcgctg aaattaaatg ccactttttc agaggtgaat 2580
 taatggacag tctggtgaa cttcaaaagct ttttgatgta taaaacttga taaatggaac 2640
 tattccatca ataggcaaaa gtgtaacaac ctatctagat ggatagtatg taatttctgc 2700
 acaggtctct gtttagtaaa tacatcactg tataccgatc aggaatcttg ctccaataaa 2760
 ggaacataaa gattt 2775

<210> 110
 <211> 4476
 <212> DNA
 <213> Homo sapien

<400> 110
 catcttgacg ccggcgggcg ggattgaatg agcccgccga gcccgggccg ccgtcgggag 50
 cagcgcaggc cgcgagccgc cgccaccatg gccacgcccgc tggccggccg cgcggggcgg 120
 cccgccacgc cgctgtcgcc cagcgccttg tcgcggtctg aggagaagga ggagctgcgc 180
 gagctcaacg accgcctggc gcactacatc gaccgcgtcc gcgcgctgga gctggagaac 240
 gaccggctcc tgctcaagat ctgagagaag gaggaggtga ccacgcgcga ggtgagtggc 300
 atcaaggcgc tgtacgagtc ggagctggcc gatgcccga gagtcctgga tgagacggct 360
 cgagagcgtg cccggctgca gatagagatt gsgaagctga gggcagagtt ggacgaggtc 420
 aacaagagcg ccaagaagag ggagggcgag cttacggtgg ccagggccg tgtgaaggac 480
 ctggagtccc tgttccaccg gagcgaggtg gagctggcag ctgccctcag cgacaagcgc 540
 ggcctggaga gtgacgtggc tgagctgctg gccagctgg ccaaggccga ggacggtcat 600
 gcagtggcca aaaagcagct ggagaaggag acgctgatgc gtgtggacct ggagaaccgc 660
 tgccagagcc tgcaggagga gctggacttc cggaagagtg tgttcgagga ggaggtgcgg 720
 gagacgcggc ggcggcacga gcggcgcttg gtggaggtgg acagcagccg gcagcaggag 780
 tacgacttca agatggcaca ggcgctggag gagctgcgga gccagcacga cgagcaagtg 840

cggtctctaca agctggagct ggagcagacc taccaggcca agctggacag cgccaagctg 900
agctctgacc agaacgacaa ggcggccagt gcggctcgcg aggagctgaa ggaggcccg 960
atgcgcctgg agtccctcag ctaccagctc tccggcctcc agaagcaggc cagtgccgct 1020
gaagatcgca ttcgggagct ggaggaggcc atggccgggg agcgggacaa gttccggaag 1080
atgctggacg ccaaggagca ggagatgacg gagatgcggg acgtgatgca gcagcagctg 1140
gccgagtacc aggagctgct ggacgtgaag ctggccctgg acatggagat caacgcctac 1200
cggaagctcc tggagggcga ggaggagagg ctgaagctgt ccccagccc atcctcgcg 1260
gtcacgctct cacgagccac ctcgagcagc agcggcagct tgtccgccac cgggcgcctg 1320
ggccgcagta agcgggaagcg gctggagggtg gaggagccct tgggcagcgg cccaagcgctc 1380
ctgggcacgg gcacgggtgg cagcgggtggc ttccacctgg ccagcaggc ctcggcctcg 1440
ggtagcgctca gcacgagga gatcgacctg gagggcaagt ttgtgcagct caagaacaac 1500
tcggacaagg atcagtctct ggggaactgg agaatcaaga ggcaggctct ggagggggag 1560
gagatcgctt acaagtctac gcccaagtac atcctgcgcg ccggccagat ggtcacgggtg 1620
tgggcagctg gtgcgggggt ggcccacagc ccccctcga cgctgggtgt gaagggccag 1680
agcagctggg gcacggggga gagcttccgc accgtcctgg ttaacgcgga tggcgaggaa 1740
gtggccatga ggactgtgaa gaagtcccg gtgatgcgtg agaatsagaa tggggaggaa 1800
gaggaggagg aagccgagtt tggcgaggag gatcttttcc accaacaggg ggacccgagg 1860
accacctcaa gaggtgcta cgtgatgtga acccacactc ctcatccaca cacctttctt 1920
taccagagc cactgaaaac tatttttata tcattggctt tctttagtgc ttgatacatt 1980
tctagagaat ttctaagga actgccagaa cgtgtgggtg ggtctcccc agccctccct 2040
cctggcgggt ctctccagc ctacttcgc tgccacttcg ccgctgccc ggagactttt 2100
caatcccacc ccactcctca tctcaccatt tggtaaatt ggaagcccag ggccaggacc 2160
cggaggttta gaagatgctt gggcttggag ggaggagggc cggcgaggct agcgagggga 2220
caggagacgg ccctgctgcg gacggagcgc ggaaactgcg taggaattca gtggtggtgg 2280
gtttttttaa ggctttctac aaaaccaaatt tcagaatcca ggcgtcgacc tgggtggggc 2340
cggggccaag cctgcattct ggctgccag ctccggacag cgggaactcc tcaggcagcc 2400
acgcagcggg tgtgggccag catgggatg gcgtggcccc caggcggggt tttactccg 2460
ctgcctgggc ttccagattc ccgttctggc agcgacccgg ccgggtttct cggacggtg 2520
actttatttg ggggagtttt cccgcagttc agttcctgac tgtcaaggc caacagggca 2560
ggggagggga agacctggg aaggaagaat gaggacagtc ccgtcgtaag acctgtcaca 2640

158

acaataagca gggaggggag atgtggaggg gacacatctg gttgccttgg aggcagaagc	2700
tgtgagtttc agaacagctg tctgcaggga acgccaccat gttgaccctc tggaggagag	2760
cgctgtggag cccctcccgt gttccagctc cgtctgccct gtgcctatat atacacatgc	2820
gtctatccat actgtgcttt tatctgtgat tttctcgctg aaaccatgtt tctcagacag	2880
gccaaaggcca cctgactcct atcacgacgc acccaagccc ctcagtccag cttcccaatg	2940
cctggcaccc cccttcggca atagctcacc gtttacaccc tccctcatag atacacagaa	3000
gttatctttt taatggatat ttatcttttt acattgggtca gtacacaggt caggagctca	3060
cgccagggcc ttgaggacag gctgaccctc ctccccgggg tggcgtgggg ctggggcacc	3120
ctccgacggc agagcctcct tcagaaagtg cagctcaagt cttaaagaca ccaaaactga	3180
gccatgggca cgcgcctct ccgggccatg gcgttcactg cagggcgggg gcggcacccg	3240
tccccatgta gatagagggg ggcgcactct accaaagcat ttcttcctgg aggctacgcc	3300
gctgtgctcc cagtcaggcg gctggtaggg agctttgcct gcccggsga taccctctgc	3360
cagccgctgg aagtgggaat gctggcgaca gactgtgtcc tctttccac cttcatagca	3420
ggaatcacc ccgcccact ggctgggctt cgtgctagcg aggttcttg ggtgggtct	3480
tggtgatctt gtcctatggg gagtctgcag tggctcagc cacatcctat gtattttggc	3540
tctggaggag caaagctgta tcctggagtt ggtctgtgat ttgccgacag ccttgacggc	3600
tgggctcagg gacaaagtcc cccccaaaac ccgcaggctc tcatgtccag acgtgccc	3660
gtcctgtcct gaaaacagca cggcccaggc ccacagaacc cccacccta catttgcctt	3720
gggtggagct gggggtggc ctaggactgc gggtgccctt agctgaagg ggtggggaga	3780
agcgtggact gggcagcctg tgggtaattg gaggttcatt gagaattgag tctttggaaa	3840
cactaagaaa atcaaatctt taaaagtat ttatggcctg ggaaacaatt tgcatttgtc	3900
cccaataacg cttagctgtg tgccgcttag aacgatgcga aaccatccct ctgtgtaagc	3960
ccgtgccgtg tgactogaag cctagcggcc tccttgcgaa gcacagacg ccaccagcc	4020
ctggggggag gccacgcct gctggaccaa cgcgggttct ggggtgcaca gcgccaggt	4080
aacgtgaag cctgccccgc tgagcccagg agccgggagg cctgcgggct gaccagaat	4140
ccgatcatgc acctgtcctc atgccagcg ctttggctgg ggttggctg aagcctgcac	4200
gcggcagttc tttgttaaag atctgaggga ctctcagtc ctggggcgtc gccgcctgca	4260
gcctcttcca agccctgcgt ccagcgagcg tcacagcaca acctgcaaaa acggagctgg	4320
gctgcagctg gggctggcat ggactttcat ttcagagatt cggtttttaa gaagatgcat	4380
gcctaattgt ttttttttt tttccaatga tttgtaatat acattttatg actggaaact	4440
ttttgtaca aactccaat aaacattttg atttta	4476

<210> 111
<211> 1887
<212> DNA
<213> Homo sapien

<400> 111
gcctggtggc gaattcggca cgaggatgag cccgccgagc cggggccgcc gtcgggagca 60
gcgcaggccg cgagccgccg ccaccatggc caccgcgctg cccggccgcg cgggcggggc 120
cgccacgccg ctgtcgccca cgcgcctgtc gcggtgcag gagaaggagg agctgcgcga 180
gctcaacgac cgctggcgc actacatcga ccgcgtccgc gcgctggagc tggagaacga 240
ccggctcctg ctcaagatct cagagaagga ggaggtgacc acgcgcgagg tgagtggcat 300
caaggcgctg tacgagtcgg agctggccga tgcccgaga gtcctggatg agacggctcg 360
agagcgtgcc cggctgcaga tagagattgg gaagctgagg gcagagttgg acgaggtcaa 420
caagagcgcc aagaagaggg agggcgagct tacggctggc cagggccgtg tgaaggacct 480
ggagtccctg ttccaccgga gcgaggtgga gctggcagct gccctcagcg acaagcgcg 540
cctggagagt gacgtggctg agctgcgggc ccagctggcc aaggccgagg acggtcatgc 600
agtggccaaa aagcagctgg agaagggtg tcttgctct cagaagtccc ggtcccatgt 660
agatagaggg gggcgcatct taccaaagca tttcctcctg gaggctacgc cgctgtgctc 720
ccagtcaggc ggctggtagg gagctttgcc tgccccgggg atacctctg ccagccgctg 780
gaagtgggaa tgctggcgac agactgtgtc ctctttccca ccttcatagc aggaatcacc 840
cggacccgac tggctgggct tcgtgctagc gagggttctg ggggtgggtc ttggtgatct 900
tgtcctatgg ggagtctgca gtggtctcag ccacatccta tgtatttttg ctctggagga 960
gcaaagctgt atcctggagt tggctctgtga tttccgaca gccttcgagg ctgggctcag 1020
ggacaaagtc cccccaaaa cccgcaggtc ctcatgtcca gacgtgccc agtcctgtcc 1080
tgaaaacagc acgccccagg ccacagAAC cccccacct acatttgctt tgggtggagc 1140
tgggggtggg cctaggactg cgggtgccct tagctgaagg ggggtggggg aagcgtggac 1200
tgggcagcct gtgggtaatt ggaggttcat tgagaattga gtctttggaa aactaagaa 1260
aatcaaattt ttaaaagtta tttatggcct gggaaacaat ttgcatttgt ccccaaatac 1320
gcttagctgt gtgccgtta gaacgatgcg aaaccatccc tctgtgtaag cccgtgccgt 1380
gtgactcgaa gcctagcgcc ctccctgcga agcatcagac gccaccagc cctgggggga 1440
ggccacgcc tgctggacca acgcgggttc tggggtgcac agcgcagggt taacgtgaa 1500
gcctgccccg ctgagcccag gagccgggag gcctgcgggc tgaccagaa tccgatcatg 1560
cacctgtcct catgccagcg gctttggctg gggttggtct gaagcctgca cgcggcagtt 1620

160

ctttgttaaa gatctgaggg actcctcagt cctggggcgt cgcgcctgc agcctcttcc 1680
aagccctgcg tccagcgagc gtcacagcac aacctgcaaa aacggagctg ggctgcagct 1740
ggggctggca tggactttca tttcagagat tcggttttta agaagatgca tgcctaattgt 1800
gttctttttt ttttccaatg atttgtaata tacattttat gactggaaac ttttttgtac 1860
aacactccaa taaacatttt gattttta 1887

<210> 112
<211> 4041
<212> DNA
<213> Homo sapien

<400> 112
catcttgcag ccggcgggcg ggattgaatg agcccgccga gcccgggccc cgtcggggag 60
cagcgcaggc cgcgagccgc cgccaccatg gccacgccgc tgcccggccg cgcgggcccg 120
cccgccacgc cgctgtcgcc caccgccttg tcgcggctgc aggagaagga ggagctgcgc 180
gagctcaacg accgcctggc gcactacatc gaccgcgtcc gcgcgctgga gctggagaac 240
gaccggctcc tgctcaagat ctcaagaag gaggaggtga ccacgcgcga ggtgagtggc 300
atcaaggcgc tgtacgagtc ggagctggcc gatgcccga gagtcctgga tgagacggct 360
cgagagcgtg cccggctgca gatagagatt ggaagctga gggcagagtt ggacgaggtc 420
aacaagagcg ccaagaagag ggagggcgag cttacggctg cccagggccg tgtgaaggac 480
ctggagtccc tgttccaccg gagcgaggtg gagctggcag ctgccctcag cgacaagcgc 540
ggcctggaga gtgacgtggc tgagctgcgg gccagctgg ccaaggccga ggacggcat 600
gcagtggcca aaaagcagct ggagaaggag acgctgatgc gtgtggacct ggagaaccgc 660
tgccagagcc tgcaggagga gctggacttc cggaagagtg tgttcgagga ggaggtgcgg 720
gagacgcggc ggccgcacga gcggcgcttg gtggaggtgg acagcagccg gcagcaggag 780
tacgacttca agatggcaca ggcgctggag gagctgcgga gccagcacga cgagcaagtg 840
cggtcttaca agctggagct ggagcagacc taccaggcca agctggacag cgccaagctg 900
agctctgacc agaacgacaa ggcggccagt gcggctcgcg aggagctgaa ggaggcccg 960
atgcgcctgg agtccctcag ctaccagctc tccggcctcc agaagcaggc cagtgcgct 1020
gaagatcgca ttcgggagct ggaggaggcc atggccgggg agcgggacaa gttccggaag 1080
atgtggacg ccaaggagca ggagatgacg gagatgcggg acgtgatgca gcagcagctg 1140
gccgagtacc aggagctgct ggacgtgaag ctggccctgg acatggagat caacgcctac 1200
cggaagctcc tggagggcga ggaggagagg ctgaagctgt ccccagccc atcctcgcgc 1260
gtcaccgtct cagcagccac ctcgagcagc agcggcagct tgtccgccac cgggcgcctg 1320

161

ggccgcagta agcgggaagcg gctggagggtg gaggagccct tgggcagcgg cccaagcgtc 1380
ctgggcacgg gcacgggtgg cagcgggtggc ttccacctgg ccagcaggc ctcggcctcg 1440
ggtagcgtca gcatcgagga gatcgacctg gagggcaagt ttgtgcagct caagaacaac 1500
tcggacaagg atcagttctt ggggaactgg agaataaga ggcaggctct ggagggggag 1560
gagatcgccct acaagttcac gcccaagtac atcctgcgcg ccggccagat ggtcacgggtg 1620
tgggcagctg gtgcgggggt ggcccacagc cccccctcga cgctgggtgt gaagggccag 1680
agcagctggg gcacggggga gagcttccgc accgtcctgg ttaacgcgga tggcgaggaa 1740
gtggccatga ggactgtgaa gaagtcctcg gtgatgcgtg agaatsagaa tggggaggaa 1800
gaggaggagg aagccgagtt tggcgaggag gatcttttcc accaacaggg ggaaccgagg 1860
accacctcaa gaggtcgtca cgtgatgtga acccacactc ctcatccaca cacctttctt 1920
taccagagc cactgaaaac tatttttata tcattggctt tctttagtcc ttgatacatt 1980
tctagagaat ttctaagcga actgccagaa cgtgtgggtg ggtctcccc agccctccct 2040
cctggcgggt ctctccagc ctacttcgc tgccacttcg ccgctgcccc ggagactttt 2100
caatcccacc ccactcctca tctcaccatt tgggtcaaatt ggaagcccag ggccaggacc 2160
cggaggttta gaagatgctt gggcttggag ggaggagggc cggcgaggct agcgagggga 2220
caggagacgg ccctgctcgc gacggagcgc ggaaactcgc taggaattca gtgggtgggg 2280
gtttttttaa ggctttctac aaaaccaaatt tcagaatcca ggcgtcgacc tgggtggggcc 2340
cggggccaag cctgcattct ggctgcccag cttcggacag cgggaactcc tcaggcagcc 2400
acgcagcggg tgtggggccag catggggatg gcgtggcccc cagggcgggt tttcactccg 2460
ctgcctgggc ttccagattc ccgttctggc agcgcaccgg ccgggtttct cggaccgttg 2520
actttatttg ggggagtttt ccgcagttc agttcctgac tgtgcaaggc caacagggca 2580
ggggagggga agacctgggg aaggaagaat gaggacagtc ccgtcgtaag acctgtcaca 2640
acaataagca gggaggggag atgtggaggg gacacatctg gttgccttgg aggcagaagc 2700
tgtgagtttc agaacagctg tctgcaggga acgccaccat gttgaccctc tggaggagag 2760
cgctgtggag cccctccgt gttccagctc cgtctgccct gtgcctatat atacacatgc 2820
gtctatccat actgtgcttt tatctgtgat tttctcgctg aaacctgtt tctcagacag 2880
gccaggcca cctgactcct atcaagacgc acccaagccc ctcagtccag cttcccaatg 2940
cctggcacc ccttcggca atagctcacc gtttacacce tccctcatag atacacagaa 3000
gttatttttt taatggatat ttattttttt acattgggtc gtacacaggt caggagctca 3060
cgccagggcc ttgaggacag gctgaccctc ctccccgggg tggcgtgggg ctggggcacc 3120

162

```

ctccgacggc agagcctcct tcagaaagtg cagctcaagt cttaaagaca caaaaactga 3180
gccatgggca cgcgcgtctt ccgggccatg gcgttcactg cagggcgggg gcggcaccgc 3240
tcccctgtga ctgcatcccg cctccctggg gacctgcctg tggcaggaag gaatgggggg 3300
ccccagcccc aggcgggaa ggagccagcg gccgacaaag cagaaacacc cgctgctcca 3360
cgtagcccct gctcgctgtc cttgctctca gaagtcccgg tcccatgtag atagaggggg 3420
gcgcatttta ccaaagcatt tcctcctgga ggctacgccc ctgtgctccc agtcaggcgg 3480
ctggtaggga gctttgcctg ccccgggat accctctgcc agccgctgga agtgggaatg 3540
ctggcgacag actgtgtcct ctttcccacc ttcatagcag gaatcaccgc gaccgcactg 3600
gtggggcttc gtgctagcga gggttctggg ggtgggtctt ggtgatcttg tcctatgggg 3660
agtctgcagt ggtctcagcc acatcctatg tattttggct ctggaggagc aaagctgtat 3720
cctggagttg gtctgtgatt tgccgacagc cttgcaggct gggctcaggg acaaagtccc 3780
ccccaaaacc cgcaggctct catcctctggg gcgtcgccgc ctgcagcctc ttccaagccc 3840
tgcgccagc gagcgtcaca gcacaacctg caaaaacgga gctgggctgc agctggggct 3900
ggcatggact ttcatttcag agattcgggt ttaagaaga tgcctgccta atgtgtctt 3960
ttttttttcc aatgatttgt aatatacat ttatgactgg aaactttttt gtacaacact 4020
ccaataaaca ttttgatttt a 4041

```

<210> 113
 <211> 165
 <212> PRT
 <213> Homo sapien

<400> 113

Gly Gly Arg Asn Arg Gly Arg Ala Gly Ser Gln Gly Gly Arg Gly Gly
 1 5 10 15

Gly Ala Gln Ala Ala Ala Arg Val Asn Arg Gly Gly Gly Pro Ile Arg
 20 25 30

Asn Arg Pro Ala Ile Ala Arg Gly Ala Ala Gly Gly Gly Gly Arg Asn
 35 40 45

Arg Pro Ala Pro Tyr Ser Arg Pro Lys Gln Leu Pro Asp Lys Trp Gln
 50 55 60

His Asp Leu Phe Asp Ser Gly Phe Gly Gly Gly Ala Gly Val Glu Thr
 65 70 75 80

Gly Gly Lys Leu Leu Val Ser Asn Leu Asp Phe Gly Val Ser Asp Ala

163

85

90

95

Asp Ile Gln Glu Leu Phe Ala Glu Phe Gly Thr Leu Lys Lys Ala Ala
 100 105 110

Val His Tyr Asp Arg Ser Gly Arg Ser Leu Gly Thr Ala Asp Val His
 115 120 125

Phe Glu Arg Lys Ala Asp Ala Leu Lys Ala Met Lys Gln Tyr Asn Gly
 130 135 140

Val Pro Leu Asp Ala Ser Tyr Ile Pro Pro Leu Leu Gln Leu Leu Pro
 145 150 155 160

Glu Asp Ser Leu Leu
 165

<210> 114
 <211> 164
 <212> PRT
 <213> Homo sapien
 <220>
 <221> MISC_FEATURE
 <222> (4)..(4)
 <223> X=any amino acid

<400> 114

Gly Ala Gly Xaa Ala Pro Gly Arg Leu Gln Gly Gly Arg Gly Gly Gly
 1 5 10 15

Ala Gln Ala Ala Ala Arg Val Asn Arg Gly Gly Gly Pro Ile Arg Asn
 20 25 30

Arg Pro Ala Ile Ala Arg Gly Ala Ala Gly Gly Gly Gly Arg Asn Arg
 35 40 45

Pro Ala Pro Tyr Ser Arg Pro Lys Gln Leu Pro Asp Lys Trp Gln His
 50 55 60

Asp Leu Phe Asp Ser Gly Phe Gly Gly Gly Ala Gly Val Glu Thr Gly
 65 70 75 80

Gly Lys Leu Leu Val Ser Asn Leu Asp Phe Gly Val Ser Asp Ala Asp
 85 90 95

Ile Gln Glu Leu Phe Ala Glu Phe Gly Thr Leu Lys Lys Ala Ala Val

164

100

105

110

His Tyr Asp Arg Ser Gly Arg Ser Leu Gly Thr Ala Asp Val His Phe
 115 120 125

Glu Arg Lys Ala Asp Ala Leu Lys Ala Met Lys Gln Tyr Asn Gly Val
 130 135 140

Pro Leu Asp Ala Ser Tyr Ile Pro Pro Leu Leu Gln Leu Leu Pro Glu
 145 150 155 160

Asp Ser Leu Leu

<210> 115
 <211> 256
 <212> PRT
 <213> Homo sapien

<400> 115

Met Ala Leu Arg Val Thr Arg Asn Ser Lys Ile Asn Ala Glu Asn Lys
 1 5 10 15

Ala Lys Ile Asn Met Ala Gly Ala Lys Arg Val Pro Thr Ala Pro Ala
 20 25 30

Ala Thr Ser Lys Pro Gly Leu Arg Pro Arg Thr Ala Leu Gly Asp Ile
 35 40 45

Gly Asn Lys Val Ser Glu Gln Leu Gln Ala Lys Met Pro Met Lys Lys
 50 55 60

Glu Ala Lys Pro Ser Ala Thr Gly Lys Val Ile Asp Lys Lys Leu Pro
 65 70 75 80

Lys Pro Leu Glu Lys Val Pro Met Leu Val Pro Val Pro Val Ser Glu
 85 90 95

Pro Val Pro Glu Pro Glu Pro Glu Pro Glu Pro Glu Pro Val Lys Glu
 100 105 110

Glu Lys Leu Ser Pro Glu Pro Ile Leu Val Asp Thr Ala Ser Pro Ser
 115 120 125

Pro Met Glu Thr Ser Gly Cys Ala Pro Ala Glu Glu Asp Leu Cys Gln
 130 135 140

165

Ala Phe Ser Asp Val Ile Leu Ala Val Asn Asp Val Asp Ala Glu Asp
 145 150 155 160

Gly Ala Asp Pro Asn Leu Cys Ser Glu Tyr Val Lys Asp Ile Tyr Ala
 165 170 175

Tyr Leu Arg Gln Leu Glu Glu Glu Gln Ala Val Arg Pro Lys Tyr Leu
 180 185 190

Leu Gly Arg Glu Val Thr Gly Asn Met Arg Ala Ile Leu Ile Asp Trp
 195 200 205

Leu Val Gln Val Gln Met Lys Ser Val Cys Ala Gly Pro Val Cys Gly
 210 215 220

Pro Ile Asp Gly Pro Ala Lys Leu Gly Ala Gln Ile Ala Gly Gly Pro
 225 230 235 240

Ala Val Trp Pro Leu Lys Gly Pro Arg Gly Arg Trp Gly Thr Leu Ala
 245 250 255

<210> 116
 <211> 250
 <212> PRT
 <213> Homo sapien

<400> 116

Ala Gly Ser Ser Arg Arg Ala Ala Ala Glu Arg Leu Leu Val Ser Ala
 1 5 10 15

Gly Cys Arg Ser Leu Ala Gly Arg Ala Ser Gly Val Leu Leu Leu Pro
 20 25 30

Ala Glu Leu Leu Pro Gly Glu Glu Glu Ala Met Ala Leu Arg Val Thr
 35 40 45

Arg Asn Ser Lys Ile Asn Ala Glu Asn Lys Ala Lys Ile Asn Met Ala
 50 55 60

Gly Ala Lys Arg Val Pro Thr Ala Pro Ala Ala Thr Ser Lys Pro Gly
 65 70 75 80

Leu Arg Pro Arg Thr Ala Leu Gly Asp Ile Gly Asn Lys Val Ser Glu
 85 90 95

Gln Leu Gln Ala Lys Met Pro Met Lys Lys Glu Ala Lys Pro Ser Ala

166

100	105	110
Thr Gly Lys Val Ile Asp Lys Lys Leu Pro Lys Pro Leu Glu Lys Val 115 120 125		
Pro Met Leu Val Pro Val Pro Val Ser Glu Pro Val Pro Glu Pro Glu 130 135 140		
Pro Glu Pro Glu Pro Glu Pro Val Lys Glu Glu Lys Leu Ser Pro Glu 145 150 155 160		
Pro Ile Leu Val Asp Thr Ala Ser Pro Ser Pro Met Glu Thr Ser Gly 165 170 175		
Cys Ala Pro Ala Glu Glu Asp Leu Cys Gln Ala Phe Ser Asp Val Ile 180 185 190		
Leu Ala Val Asn Asp Val Asp Ala Glu Asp Gly Ala Asp Pro Asn Leu 195 200 205		
Cys Ser Glu Tyr Val Lys Asp Ile Tyr Ala Tyr Leu Arg Gln Leu Glu 210 215 220		
Glu Glu Gln Ala Val Arg Pro Lys Tyr Leu Leu Gly Arg Glu Val Thr 225 230 235 240		
Gly Asn Met Arg Ala Ile Leu Ile Asp Trp 245 250		

<210> 117
 <211> 406
 <212> PRT
 <213> Homo sapien

<400> 117

Met Glu Ala Ala Ala Val Thr Val Thr Arg Ser Ala Thr Arg Arg Arg 1 5 10 15		
Arg Arg Gln Leu Gln Gly Leu Ala Ala Pro Glu Ala Gly Thr Gln Glu 20 25 30		
Glu Gln Glu Asp Gln Glu Pro Arg Pro Arg Arg Arg Pro Gly Arg 35 40 45		
Ser Ile Lys Asp Glu Glu Glu Glu Thr Val Phe Arg Glu Val Val Ser 50 55 60		

167

Phe	Ser	Pro	Asp	Pro	Leu	Pro	Val	Arg	Tyr	Tyr	Asp	Lys	Asp	Thr	Thr	65	70	75	80
Lys	Pro	Ile	Ser	Phe	Tyr	Leu	Ser	Ser	Leu	Glu	Glu	Leu	Leu	Ala	Trp	85	90	95	
Lys	Pro	Arg	Leu	Glu	Asp	Gly	Phe	Asn	Val	Ala	Leu	Glu	Pro	Leu	Ala	100	105	110	
Cys	Arg	Gln	Pro	Pro	Leu	Ser	Ser	Gln	Arg	Pro	Arg	Thr	Leu	Leu	Cys	115	120	125	
His	Asp	Met	Met	Gly	Gly	Tyr	Leu	Asp	Asp	Arg	Phe	Ile	Gln	Gly	Ser	130	135	140	
Val	Val	Gln	Thr	Pro	Tyr	Ala	Phe	Tyr	His	Trp	Gln	Cys	Ile	Asp	Val	145	150	155	160
Phe	Val	Tyr	Phe	Ser	His	His	Thr	Val	Thr	Ile	Pro	Pro	Val	Gly	Trp	165	170	175	
Thr	Asn	Thr	Ala	His	Arg	His	Gly	Val	Cys	Val	Leu	Gly	Thr	Phe	Ile	180	185	190	
Thr	Glu	Trp	Asn	Glu	Gly	Gly	Arg	Leu	Cys	Glu	Ala	Phe	Leu	Ala	Gly	195	200	205	
Asp	Glu	Arg	Ser	Tyr	Gln	Ala	Val	Ala	Asp	Arg	Leu	Val	Gln	Ile	Thr	210	215	220	
Gln	Phe	Phe	Arg	Phe	Asp	Gly	Trp	Leu	Ile	Asn	Ile	Glu	Asn	Ser	Leu	225	230	235	240
Ser	Leu	Ala	Ala	Val	Gly	Asn	Met	Pro	Pro	Phe	Leu	Arg	Tyr	Leu	Thr	245	250	255	
Thr	Gln	Leu	His	Arg	Gln	Val	Pro	Gly	Gly	Leu	Val	Leu	Trp	Tyr	Asp	260	265	270	
Ser	Val	Val	Gln	Ser	Gly	Gln	Leu	Lys	Trp	Gln	Asp	Glu	Leu	Asn	Gln	275	280	285	
His	Asn	Arg	Val	Phe	Phe	Asp	Ser	Cys	Asp	Gly	Phe	Phe	Thr	Asn	Tyr	290	295	300	

168

Asn Trp Arg Glu Glu His Leu Glu Arg Met Leu Gly Gln Ala Gly Glu
 305 310 315 320

Arg Arg Ala Asp Val Tyr Val Gly Val Asp Val Phe Ala Arg Gly Asn
 325 330 335

Val Val Gly Gly Arg Phe Asp Thr Asp Lys Val Gly Gly Gly Phe Arg
 340 345 350

Pro Arg Ala Ser Gly Pro Val Pro Pro Leu Gly Pro His Phe Leu Met
 355 360 365

Asp Leu Pro Phe Pro Ser Ala Pro Gln Arg Asn Asp Ser Ser Cys Ser
 370 375 380

Ser Gln Ser Gly Asp Pro Val Ala Leu Arg Asn Arg Cys Pro Ala Pro
 385 390 395 400

Ala Lys Leu Cys Pro His
 405

<210> 118
 <211> 525
 <212> PRT
 <213> Homo sapien

<400> 118

Met Glu Ala Ala Ala Val Thr Val Thr Arg Ser Ala Thr Arg Arg Arg
 1 5 10 15

Arg Arg Gln Leu Gln Gly Leu Ala Ala Pro Glu Ala Gly Thr Gln Glu
 20 25 30

Glu Gln Glu Asp Gln Glu Pro Arg Pro Arg Arg Arg Pro Gly Arg
 35 40 45

Ser Ile Lys Asp Glu Glu Glu Glu Thr Val Phe Arg Glu Val Val Ser
 50 55 60

Phe Ser Pro Asp Pro Leu Pro Val Arg Tyr Tyr Asp Lys Asp Thr Thr
 65 70 75 80

Lys Pro Ile Ser Phe Tyr Leu Ser Ser Leu Glu Glu Leu Leu Ala Trp
 85 90 95

Lys Pro Arg Leu Glu Asp Gly Phe Asn Val Ala Leu Glu Pro Leu Ala
 100 105 110

169

Cys Arg Gln Pro Pro Leu Ser Ser Gln Arg Pro Arg Thr Leu Leu Cys
 115 120 125

His Asp Met Met Gly Gly Tyr Leu Asp Asp Arg Phe Ile Gln Gly Ser
 130 135 140

Val Val Gln Thr Pro Tyr Ala Phe Tyr His Trp Gln Cys Ile Asp Val
 145 150 155 160

Phe Val Tyr Phe Ser His His Thr Val Thr Ile Pro Pro Val Gly Trp
 165 170 175

Thr Asn Thr Ala His Arg His Gly Val Cys Val Leu Gly Thr Phe Ile
 180 185 190

Thr Glu Trp Asn Glu Gly Gly Arg Leu Cys Glu Ala Phe Leu Ala Gly
 195 200 205

Asp Glu Arg Ser Tyr Gln Ala Val Ala Asp Arg Leu Val Gln Ile Thr
 210 215 220

Gln Phe Phe Arg Phe Asp Gly Trp Leu Ile Asn Ile Glu Asn Ser Leu
 225 230 235 240

Ser Leu Ala Ala Val Gly Asn Met Pro Pro Phe Leu Arg Tyr Leu Thr
 245 250 255

Thr Gln Leu His Arg Gln Val Pro Gly Gly Leu Val Leu Trp Tyr Asp
 260 265 270

Ser Val Val Gln Ser Gly Gln Leu Lys Trp Gln Asp Glu Leu Asn Gln
 275 280 285

His Asn Arg Val Phe Phe Asp Ser Cys Asp Gly Phe Phe Thr Asn Tyr
 290 295 300

Asn Trp Arg Glu Glu His Leu Glu Arg Met Leu Gly Gln Ala Gly Glu
 305 310 315 320

Arg Arg Ala Asp Val Tyr Val Gly Val Asp Val Phe Ala Arg Gly Asn
 325 330 335

Val Val Gly Gly Arg Phe Asp Thr Asp Lys Ser Leu Glu Leu Ile Arg
 340 345 350

170

Lys His Gly Phe Ser Val Ala Leu Phe Ala Pro Gly Trp Val Tyr Glu
 355 360 365

Cys Leu Glu Lys Lys Asp Phe Phe Gln Asn Gln Asp Lys Phe Trp Gly
 370 375 380

Arg Leu Glu Arg Tyr Leu Pro Thr His Ser Ile Cys Ser Leu Pro Phe
 385 390 395 400

Val Thr Ser Phe Cys Leu Gly Met Gly Ala Arg Arg Val Cys Tyr Gly
 405 410 415

Gln Glu Glu Ala Val Gly Pro Trp Tyr His Leu Ser Ala Gln Glu Ile
 420 425 430

Gln Pro Leu Phe Gly Glu His Arg Leu Gly Gly Asp Gly Arg Gly Trp
 435 440 445

Val Arg Thr His Cys Cys Leu Glu Asp Ala Trp His Gly Gly Ser Ser
 450 455 460

Leu Leu Val Arg Gly Val Ile Pro Pro Glu Val Gly Asn Val Ala Val
 465 470 475 480

Arg Trp Val Ser Asp Gly Gly Arg Trp Ala His Gln Leu Leu Pro Ser
 485 490 495

His Val Val Ala Met Glu Leu Asp Arg Trp Gly Ser Gly Gly Gln Asn
 500 505 510

Lys Asp Arg Gly Gln Thr Gln Met Gly Phe Leu Lys Leu
 515 520 525

<210> 119

<211> 327

<212> PRT

<213> Homo sapien

<400> 119

Met Phe Gln Pro Thr Lys Glu Ser Gly Leu Gly Gly Gly Leu Val Pro
 1 5 10 15

Trp Leu Arg Thr Gly Pro Arg Cys Gly Ser Ile Trp His Pro Gly Pro
 20 25 30

Leu Phe Leu Glu Gly Gly Ala Gly Gly Arg Asp Leu Glu Leu Ala Ser

171

35

40

45

Ile Ser Gln Trp Ser Leu His Gly Thr His His Arg Thr Phe Phe Pro
 50 55 60

Arg Leu Phe Ser Leu Gln Ala Pro Val Pro Pro Lys Ile Tyr Leu Ser
 65 70 75 80

Met Val Tyr Lys Leu Glu Gly Pro Thr Asp Val Thr Val Ala Leu Glu
 85 90 95

Leu Thr Thr Gly Asp Ala Gly Ser Cys His Ile Gly Gly Ile Ser Val
 100 105 110

Leu Asn Ala Glu Thr Ser Ser Arg His Ser Leu Arg Pro Leu Arg Val
 115 120 125

Pro Pro Thr Lys Leu Ala Arg Trp Val Gly Arg Cys Gly Arg Gln Leu
 130 135 140

Ser Gly Gly Trp Val Gln His Cys Tyr Glu Val Ser Leu Arg Gly Cys
 145 150 155 160

Leu Leu Leu Asp Leu Leu Val Cys Phe Ser Arg Pro Pro Gly Ser Arg
 165 170 175

Glu Glu Glu Ser Phe Thr Cys Arg Leu Gly Glu Ile Gln Val Val Asp
 180 185 190

Ala Ala Ser Leu Leu Ala Pro Leu Pro Gln Val Gln Ala Val Thr Ile
 195 200 205

Ser His Ile Arg Trp Gln Pro Ser Ala Ser Glu Arg Glu Gly Pro Pro
 210 215 220

Ala Leu Leu Gln Leu Ser Cys Thr Leu His Trp Ser Phe Leu Leu Ser
 225 230 235 240

Gln Val Arg Cys Phe Arg Ile His Cys Trp Gly Gly Met Ser Asp Asp
 245 250 255

Ser Pro Gly Arg Glu Leu Pro Arg Pro Glu Met Pro Met Phe Leu Gly
 260 265 270

Leu Ala Phe Ala Thr Gln Tyr Arg Ile Val Asp Leu Leu Val Glu Ala
 275 280 285

172

Ala Gly Pro Gly Gln Asp Arg Arg Met Glu Phe Leu Val Glu Pro Val
 290 295 300

Pro Lys Glu Gly Phe Arg Val Pro Gln Ala Glu Trp Gly Arg Ala Val
 305 310 315 320

Leu Leu Tyr Ser Ala Pro Ala
 325

<210> 120
 <211> 384
 <212> PRT
 <213> Homo sapien

<400> 120

Gln Ile Pro Arg Thr Val Ser Ser Cys Arg Thr Gly Leu Ser Pro Leu
 1 5 10 15

His Ile Ser Pro Pro Ser Ser Pro Ser Pro Pro Lys Pro Pro Leu Tyr
 20 25 30

Ser Ala Ser Val Ser Leu Asp Thr Leu Asp Ala Pro Tyr Glu Gly Ile
 35 40 45

Pro Tyr Gly Ile Ser Glu Leu Arg Cys Phe Ser Pro Gln Lys Asn Leu
 50 55 60

Ala Leu Gly Glu Asp Leu Ser Pro Gly Tyr Gly Gln Asp His Asp Val
 65 70 75 80

Gly Ala Phe Gly Thr Gln Ala Pro Cys Ser Trp Arg Glu Gly Leu Val
 85 90 95

Asp Ala Ile Trp Ser Trp Leu Arg Phe Leu Ser Gly Leu Ser Thr Ala
 100 105 110

Pro Ile Thr Gly Pro Phe Ser Pro Gly Tyr Phe Tyr Ser Leu Gln Ala
 115 120 125

Pro Val Pro Pro Lys Ile Tyr Leu Ser Met Val Tyr Lys Leu Glu Gly
 130 135 140

Pro Thr Asp Val Thr Val Ala Leu Glu Leu Thr Thr Gly Asp Ala Gly
 145 150 155 160

173

Ser Cys His Ile Gly Gly Ile Ser Val Leu Asn Ala Glu Thr Ser Ser
 165 170 175

Arg His Ser Leu Arg Pro Leu Arg Val Pro Pro Thr Lys Leu Ala Arg
 180 185 190

Trp Val Gly Arg Cys Gly Arg Gln Leu Ser Gly Gly Trp Val Gln His
 195 200 205

Cys Tyr Glu Val Ser Leu Arg Gly Cys Leu Leu Leu Asp Leu Leu Val
 210 215 220

Cys Phe Ser Arg Pro Pro Gly Ser Arg Glu Glu Glu Ser Phe Thr Cys
 225 230 235 240

Arg Leu Gly Glu Ile Gln Val Val Asp Ala Ala Ser Leu Leu Ala Pro
 245 250 255

Leu Pro Gln Val Gln Ala Val Thr Ile Ser His Ile Arg Trp Gln Pro
 260 265 270

Ser Ala Ser Glu Arg Glu Gly Pro Pro Ala Leu Leu Gln Leu Ser Cys
 275 280 285

Thr Leu His Trp Ser Phe Leu Leu Ser Gln Val Arg Cys Phe Arg Ile
 290 295 300

His Cys Trp Gly Gly Met Ser Asp Asp Ser Pro Gly Arg Glu Leu Pro
 305 310 315 320

Arg Pro Glu Met Pro Met Phe Leu Gly Leu Ala Phe Ala Thr Gln Tyr
 325 330 335

Arg Ile Val Asp Leu Leu Val Glu Ala Ala Gly Pro Gly Gln Asp Arg
 340 345 350

Arg Met Glu Phe Leu Val Glu Pro Val Pro Lys Glu Gly Phe Arg Val
 355 360 365

Pro Gln Ala Glu Trp Gly Arg Ala Val Leu Leu Tyr Ser Ala Pro Ala
 370 375 380

<210> 121
 <211> 450
 <212> PRT
 <213> Homo sapien

174

<400> 121

Gln Ile Pro Arg Thr Val Ser Ser Cys Arg Thr Gly Leu Ser Pro Leu
 1 5 10 15

His Ile Ser Pro Pro Ser Ser Pro Ser Pro Pro Lys Pro Pro Leu Tyr
 20 25 30

Ser Ala Ser Val Ser Leu Asp Thr Leu Asp Ala Pro Tyr Glu Gly Ile
 35 40 45

Pro Tyr Gly Ile Ser Glu Leu Arg Cys Phe Ser Pro Gln Lys Asn Leu
 50 55 60

Ala Leu Gly Glu Asp Leu Ser Pro Gly Tyr Gly Gln Asp His Asp Val
 65 70 75 80

Gly Ala Phe Gly Thr Gln Ala Pro Cys Ser Trp Arg Glu Gly Leu Val
 85 90 95

Asp Ala Ile Trp Ser Trp Leu Arg Phe Leu Ser Gly Leu Ser Thr Ala
 100 105 110

Pro Ile Thr Gly Pro Phe Ser Pro Gly Tyr Phe Tyr Ser Leu Gln Ala
 115 120 125

Pro Val Pro Pro Lys Ile Tyr Leu Ser Met Val Tyr Lys Leu Glu Gly
 130 135 140

Pro Thr Asp Val Thr Val Ala Leu Glu Leu Thr Thr Gly Asp Ala Gly
 145 150 155 160

Ser Cys His Ile Gly Gly Ile Ser Val Leu Asn Ala Glu Thr Ser Ser
 165 170 175

Arg His Ser Leu Arg Pro Leu Arg Val Pro Pro Thr Lys Leu Ala Arg
 180 185 190

Trp Val Gly Arg Cys Gly Arg Gln Leu Ser Gly Gly Trp Val Gln His
 195 200 205

Cys Tyr Glu Val Ser Leu Arg Gly Cys Leu Leu Leu Asp Leu Leu Val
 210 215 220

Cys Phe Ser Arg Pro Pro Gly Ser Arg Glu Glu Glu Ser Phe Thr Cys
 225 230 235 240

175

Arg Leu Gly Glu Ile Gln Val Met Leu Pro Arg Gly Ala Arg Ala Gly
 245 250 255

Leu Ala Val Cys Pro Ala Gly Val Gly Val Glu Ala Ala Pro Gly Arg
 260 265 270

Pro Leu Leu Gly Phe Ser Gly Glu Leu Gly Trp Arg Ser Gln Gly Gly
 275 280 285

Glu Met Cys Ala Trp Gly His Pro Leu Pro Ala Pro Gly Arg Pro Ala
 290 295 300

Val Leu Ser Leu Leu Ser Cys Gln Val Val Asp Ala Ala Ser Leu Leu
 305 310 315 320

Ala Pro Leu Pro Gln Val Gln Ala Val Thr Ile Ser His Ile Arg Trp
 325 330 335

Gln Pro Ser Ala Ser Glu Arg Glu Gly Pro Pro Ala Leu Leu Gln Leu
 340 345 350

Ser Cys Thr Leu His Trp Ser Phe Leu Leu Ser Gln Val Arg Cys Phe
 355 360 365

Arg Ile His Cys Trp Gly Gly Met Ser Asp Asp Ser Pro Gly Arg Glu
 370 375 380

Leu Pro Arg Pro Glu Met Pro Met Phe Leu Gly Leu Ala Phe Ala Thr
 385 390 395 400

Gln Tyr Arg Ile Val Asp Leu Leu Val Glu Ala Ala Gly Pro Gly Gln
 405 410 415

Asp Arg Arg Met Glu Phe Leu Val Glu Pro Val Pro Lys Glu Gly Phe
 420 425 430

Arg Val Pro Gln Ala Glu Trp Gly Arg Ala Val Leu Leu Tyr Ser Ala
 435 440 445

Pro Ala
 450

<210> 122
 <211> 302
 <212> PRT
 <213> Homo sapien

176

<400> 122

Met Glu Ala Ala Ala Val Thr Val Thr Arg Ser Ala Thr Arg Arg Arg
 1 5 10 15

Arg Arg Gln Leu Gln Gly Leu Ala Ala Pro Glu Ala Gly Thr Gln Glu
 20 25 30

Glu Gln Glu Asp Gln Glu Pro Arg Pro Arg Arg Arg Arg Pro Gly Arg
 35 40 45

Ser Ile Lys Asp Glu Glu Glu Glu Thr Val Phe Arg Glu Val Val Ser
 50 55 60

Phe Ser Pro Asp Pro Leu Pro Val Arg Tyr Tyr Asp Lys Asp Thr Thr
 65 70 75 80

Lys Pro Ile Ser Phe Tyr Leu Ser Ser Leu Glu Glu Leu Leu Ala Trp
 85 90 95

Lys Pro Arg Leu Glu Asp Gly Phe Asn Val Ala Leu Glu Pro Leu Ala
 100 105 110

Cys Arg Gln Pro Pro Leu Ser Ser Gln Arg Pro Arg Thr Leu Leu Cys
 115 120 125

His Asp Met Met Gly Gly Tyr Leu Asp Asp Arg Phe Ile Gln Gly Ser
 130 135 140

Val Val Gln Thr Pro Tyr Ala Phe Tyr His Trp Gln Cys Ile Asp Val
 145 150 155 160

Phe Val Tyr Phe Ser His His Thr Val Thr Ile Pro Pro Val Gly Trp
 165 170 175

Thr Asn Thr Ala His Arg His Gly Val Cys Val Leu Gly Thr Phe Ile
 180 185 190

Thr Glu Trp Asn Glu Gly Gly Arg Leu Cys Glu Ala Phe Leu Ala Gly
 195 200 205

Asp Glu Arg Ser Tyr Gln Ala Val Ala Asp Arg Leu Val Gln Ile Thr
 210 215 220

Gln Phe Phe Arg Phe Asp Gly Trp Leu Ile Asn Ile Glu Asn Ser Leu
 225 230 235 240

Asn Tyr Ala Ser Thr Phe Thr Trp Trp Asp Arg Ile Phe Gly Thr Asp
130 135 140

178

Ser Gln Tyr Asn Ala Tyr Asn Glu Lys Arg Lys Lys Phe Glu Lys Lys
 145 150 155 160

Thr Glu

<210> 124
 <211> 206
 <212> PRT
 <213> Homo sapien

<400> 124

Met Gly Glu Pro Gln Gly Ser Met Arg Ile Leu Val Thr Gly Gly Ser
 1 5 10 15

Gly Leu Val Gly Lys Ala Ile Gln Lys Val Val Ala Asp Gly Ala Gly
 20 25 30

Leu Pro Gly Glu Asp Trp Val Phe Val Ser Ser Lys Asp Ala Asp Leu
 35 40 45

Thr Asp Thr Ala Gln Thr Arg Ala Leu Phe Glu Lys Val Gln Pro Thr
 50 55 60

His Val Ile His Leu Ala Ala Met Val Gly Gly Leu Phe Arg Asn Ile
 65 70 75 80

Lys Tyr Asn Leu Asp Phe Trp Arg Lys Asn Val His Met Asn Asp Asn
 85 90 95

Val Leu His Ser Ala Phe Glu Val Gly Ala Arg Lys Val Val Ser Cys
 100 105 110

Leu Ser Thr Cys Ile Phe Pro Asp Lys Thr Thr Tyr Pro Ile Asp Glu
 115 120 125

Thr Met Ile His Asn Gly Pro Pro His Asn Ser Asn Phe Gly Tyr Ser
 130 135 140

Tyr Ala Lys Arg Met Ile Asp Val Gln Asn Ser Ala Gly Pro Thr Ser
 145 150 155 160

Ser Ser Thr Ala Ala Pro Ser Pro Leu Ser Ser Pro Pro Thr Ser Ser
 165 170 175

Gly Pro Thr Thr Thr Ser Thr Ser Arg Met Ala Thr Cys Cys Leu Ala
 180 185 190

179

Ser Ser Thr Arg Cys Thr Trp Pro Arg Ala Ala Ala Arg Pro
 195 200 205

<210> 125
 <211> 380
 <212> PRT
 <213> Homo sapien

<400> 125

Leu Gln Val Pro Ala Val Pro Gly Thr Leu Arg Ala Pro Gly Thr Pro
 1 5 10 15

Phe Pro Arg Val Pro Arg Pro Ser Leu Pro Ala Pro Pro Pro Thr Trp
 20 25 30

Leu Arg Gly Gln Pro Glu Arg Thr Arg Pro Glu Ala Ala Val Gly Glu
 35 40 45

Pro Ala Val Gly Leu Asp Ala Gly Ala Thr Asp Met Gly Glu Pro Gln
 50 55 60

Gly Ser Met Arg Ile Leu Val Thr Gly Gly Ser Gly Leu Val Gly Lys
 65 70 75 80

Ala Ile Gln Lys Val Val Ala Asp Gly Ala Gly Leu Pro Gly Glu Asp
 85 90 95

Trp Val Phe Val Ser Ser Lys Asp Ala Asp Leu Thr Asp Thr Ala Gln
 100 105 110

Thr Arg Ala Leu Phe Glu Lys Val Gln Pro Thr His Val Ile His Leu
 115 120 125

Ala Ala Met Val Gly Gly Leu Phe Arg Asn Ile Lys Tyr Asn Leu Asp
 130 135 140

Phe Trp Arg Lys Asn Val His Met Asn Asp Asn Val Leu His Ser Ala
 145 150 155 160

Phe Glu Val Gly Ala Arg Lys Val Val Ser Cys Leu Ser Thr Cys Ile
 165 170 175

Phe Pro Asp Lys Thr Thr Tyr Pro Ile Asp Glu Thr Met Ile His Asn
 180 185 190

180

Gly Pro Pro His Asn Ser Asn Phe Gly Tyr Ser Tyr Ala Lys Arg Met
 195 200 205

Ile Asp Val Gln Asn Arg Ala Tyr Phe Gln Gln Tyr Gly Cys Thr Phe
 210 215 220

Thr Ala Val Ile Pro Thr Asn Val Phe Gly Pro His Asp Asn Phe Asn
 225 230 235 240

Ile Glu Asp Gly His Val Leu Pro Gly Leu Ile His Lys Val His Leu
 245 250 255

Ala Lys Ser Ser Gly Ser Ala Leu Thr Val Trp Gly Thr Gly Asn Pro
 260 265 270

Arg Arg Gln Phe Ile Tyr Ser Leu Asp Leu Ala Gln Leu Phe Ile Trp
 275 280 285

Val Leu Arg Glu Tyr Asn Glu Val Glu Pro Ile Ile Leu Ser Val Gly
 290 295 300

Glu Glu Asp Glu Val Ser Ile Lys Glu Ala Ala Glu Ala Val Val Glu
 305 310 315 320

Ala Met Asp Phe His Gly Glu Val Thr Phe Asp Thr Thr Lys Ser Asp
 325 330 335

Gly Gln Phe Lys Lys Thr Ala Ser Asn Ser Lys Leu Arg Thr Tyr Leu
 340 345 350

Pro Asp Phe Arg Phe Thr Pro Phe Lys Gln Ala Val Lys Glu Thr Cys
 355 360 365

Ala Trp Phe Thr Asp Asn Tyr Glu Gln Ala Arg Lys
 370 375 380

<210> 126

<211> 380

<212> PRT

<213> Homo sapien

<400> 126

Leu Gln Val Pro Ala Val Pro Gly Thr Leu Arg Ala Pro Gly Thr Pro
 1 5 10 15

Phe Pro Arg Val Pro Arg Pro Ser Leu Pro Ala Pro Pro Thr Trp
 20 25 30

181

Leu Arg Gly Gln Pro Glu Arg Thr Arg Pro Glu Ala Ala Val Gly Glu
 35 40 45

Pro Ala Val Gly Leu Asp Ala Gly Ala Thr Asp Met Gly Glu Pro Gln
 50 55 60

Gly Ser Met Arg Ile Leu Val Thr Gly Gly Ser Gly Leu Val Gly Lys
 65 70 75 80

Ala Ile Gln Lys Val Val Ala Asp Gly Ala Gly Leu Pro Gly Glu Asp
 85 90 95

Trp Val Phe Val Ser Ser Lys Asp Ala Asp Leu Thr Asp Thr Ala Gln
 100 105 110

Thr Arg Ala Leu Phe Glu Lys Val Gln Pro Thr His Val Ile His Leu
 115 120 125

Ala Ala Met Val Gly Gly Leu Phe Arg Asn Ile Lys Tyr Asn Leu Asp
 130 135 140

Phe Trp Arg Lys Asn Val His Met Asn Asp Asn Val Leu His Ser Ala
 145 150 155 160

Phe Glu Val Gly Ala Arg Lys Val Val Ser Cys Leu Ser Thr Cys Ile
 165 170 175

Phe Pro Asp Lys Thr Thr Tyr Pro Ile Asp Glu Thr Met Ile His Asn
 180 185 190

Gly Pro Pro His Asn Ser Asn Phe Gly Tyr Ser Tyr Ala Lys Arg Met
 195 200 205

Ile Asp Val Gln Asn Arg Ala Tyr Phe Gln Gln Tyr Gly Cys Thr Phe
 210 215 220

Thr Ala Val Ile Pro Thr Asn Val Phe Gly Pro His Asp Asn Phe Asn
 225 230 235 240

Ile Glu Asp Gly His Val Leu Pro Gly Leu Ile His Lys Val His Leu
 245 250 255

Ala Lys Ser Ser Gly Ser Ala Leu Thr Val Trp Gly Thr Gly Asn Pro
 260 265 270

182

Arg Arg Gln Phe Ile Tyr Ser Leu Asp Leu Ala Gln Leu Phe Ile Trp
 275 280 285

Val Leu Arg Glu Tyr Asn Glu Val Glu Pro Ile Ile Leu Ser Val Gly
 290 295 300

Glu Glu Asp Glu Val Ser Ile Lys Glu Ala Ala Glu Ala Val Val Glu
 305 310 315 320

Ala Met Asp Phe His Gly Glu Val Thr Phe Asp Thr Thr Lys Ser Asp
 325 330 335

Gly Gln Phe Lys Lys Thr Ala Ser Asn Ser Lys Leu Arg Thr Tyr Leu
 340 345 350

Pro Asp Phe Arg Phe Thr Pro Phe Lys Gln Ala Val Lys Glu Thr Cys
 355 360 365

Ala Trp Phe Thr Asp Asn Tyr Glu Gln Ala Arg Lys
 370 375 380

<210> 127

<211> 334

<212> PRT

<213> Homo sapien

<400> 127

Met Arg Ala Leu Ala Ala Asn Arg Val Asn Asp Leu Cys Gln Glu Pro
 1 5 10 15

Pro Ser Gln Gly Cys Leu Pro Pro Pro Leu Val Ser Gln Arg Gly Val
 20 25 30

Glu Cys Thr Phe Ser Arg Pro Ser Gly Glu Ser Trp Val Gly Thr Ser
 35 40 45

Cys Ser Gly Leu Gly Gly Ser Ser Gly Pro Leu Arg Arg Cys Arg Leu
 50 55 60

Arg Ala Pro Arg Gly Thr Gly Leu Arg Arg Gly Ser Ala Ser Val Gln
 65 70 75 80

Leu Gly Leu Ser Gly Cys Gln Trp Thr Met Pro His Ser Glu Gly Leu
 85 90 95

Thr Leu Cys Gln Leu Pro Gln Lys Ser Gly Ala Pro Lys Asp Glu Ser

183

100	105	110
-----	-----	-----

Val Met Thr Ser Ala Ser His Cys Leu Thr Leu Gln Gly Ala Thr Asp
115 120 125

Met Gly Glu Pro Gln Gly Ser Met Arg Ile Leu Val Thr Gly Gly Ser
130 135 140

Gly Leu Val Gly Lys Ala Ile Gln Lys Val Val Ala Asp Gly Ala Gly
145 150 155 160

Leu Pro Gly Glu Asp Trp Val Phe Val Ser Ser Lys Asp Ala Asp Leu
165 170 175

Thr Asp Thr Ala Gln Thr Arg Ala Leu Phe Glu Lys Val Gln Pro Thr
180 185 190

His Val Ile His Leu Ala Ala Met Val Gly Gly Leu Phe Arg Asn Ile
195 200 205

Lys Tyr Asn Leu Asp Phe Trp Arg Lys Asn Val His Met Asn Asp Asn
210 215 220

Val Leu His Ser Ala Phe Glu Val Gly Ala Arg Lys Val Val Ser Cys
225 230 235 240

Leu Ser Thr Cys Ile Phe Pro Asp Lys Thr Thr Tyr Pro Ile Asp Glu
245 250 255

Thr Met Ile His Asn Gly Pro Pro His Asn Ser Asn Phe Gly Tyr Ser
260 265 270

Tyr Ala Lys Arg Met Ile Asp Val Gln Asn Ser Ala Gly Pro Thr Ser
275 280 285

Ser Ser Thr Ala Ala Pro Ser Pro Leu Ser Ser Pro Pro Thr Ser Ser
290 295 300

Gly Pro Thr Thr Thr Ser Thr Ser Arg Met Ala Thr Cys Cys Leu Ala
305 310 315 320

Ser Ser Thr Arg Cys Thr Trp Pro Arg Ala Ala Ala Arg Pro
325 330

<210> 128
<211> 327

184

<212> PRT

<213> Homo sapien

<400> 128

His Tyr Ser Ala Thr Asp Met Gly Glu Pro Gln Gly Ser Met Arg Ile
 1 5 10 15

Leu Val Thr Gly Gly Ser Gly Leu Val Gly Lys Ala Ile Gln Lys Val
 20 25 30

Val Ala Asp Gly Ala Gly Leu Pro Gly Glu Asp Trp Val Phe Val Ser
 35 40 45

Ser Lys Asp Ala Asp Leu Thr Asp Thr Ala Gln Thr Arg Ala Leu Phe
 50 55 60

Glu Lys Val Gln Pro Thr His Val Ile His Leu Ala Ala Met Val Gly
 65 70 75 80

Gly Leu Phe Arg Asn Ile Lys Tyr Asn Leu Asp Phe Trp Arg Lys Asn
 85 90 95

Val His Met Asn Asp Asn Val Leu His Ser Ala Phe Glu Val Gly Ala
 100 105 110

Arg Lys Val Val Ser Cys Leu Ser Thr Cys Ile Phe Pro Asp Lys Thr
 115 120 125

Thr Tyr Pro Ile Asp Glu Thr Met Ile His Asn Gly Pro Pro His Asn
 130 135 140

Ser Asn Phe Gly Tyr Ser Tyr Ala Lys Arg Met Ile Asp Val Gln Asn
 145 150 155 160

Arg Ala Tyr Phe Gln Gln Tyr Gly Cys Thr Phe Thr Ala Val Ile Pro
 165 170 175

Thr Asn Val Phe Gly Pro His Asp Asn Phe Asn Ile Glu Asp Gly His
 180 185 190

Val Leu Pro Gly Leu Ile His Lys Val His Leu Ala Lys Ser Ser Gly
 195 200 205

Ser Ala Leu Thr Val Trp Gly Thr Gly Asn Pro Arg Arg Gln Phe Ile
 210 215 220

185

Tyr Ser Leu Asp Leu Ala Gln Leu Phe Ile Trp Val Leu Arg Glu Tyr
 225 230 235 240

Asn Glu Val Glu Pro Ile Ile Leu Ser Val Gly Glu Glu Asp Glu Val
 245 250 255

Ser Ile Lys Glu Ala Ala Glu Ala Val Val Glu Ala Met Asp Phe His
 260 265 270

Gly Glu Val Thr Phe Asp Thr Thr Lys Ser Asp Gly Gln Phe Lys Lys
 275 280 285

Thr Ala Ser Asn Ser Lys Leu Arg Thr Tyr Leu Pro Asp Phe Arg Phe
 290 295 300

Thr Pro Phe Lys Gln Ala Val Lys Glu Thr Cys Ala Trp Phe Thr Asp
 305 310 315 320

Asn Tyr Glu Gln Ala Arg Lys
 325

<210> 129
 <211> 161
 <212> PRT
 <213> Homo sapien

<400> 129

Met Gly Glu Pro Gln Gly Ser Met Arg Ile Leu Val Thr Gly Gly Ser
 1 5 10 15

Gly Leu Val Gly Lys Ala Ile Gln Lys Val Val Ala Asp Gly Ala Gly
 20 25 30

Leu Pro Gly Glu Asp Trp Val Phe Val Ser Ser Lys Asp Ala Asp Leu
 35 40 45

Thr Asp Thr Ala Gln Thr Arg Ala Leu Phe Glu Lys Val Gln Pro Thr
 50 55 60

His Val Ile His Leu Ala Ala Met Val Gly Gly Leu Phe Arg Asn Ile
 65 70 75 80

Lys Tyr Asn Leu Asp Phe Trp Arg Lys Asn Val His Met Asn Asp Asn
 85 90 95

Val Leu His Ser Ala Phe Glu Val Gly Ala Arg Lys Val Val Ser Cys
 100 105 110

186

Leu Ser Thr Cys Ile Phe Pro Asp Lys Thr Thr Tyr Pro Ile Asp Glu
 115 120 125

Thr Met Ile His Asn Gly Pro Pro His Asn Ser Asn Phe Gly Tyr Ser
 130 135 140

Tyr Ala Lys Arg Met Ile Asp Val Gln Asn Arg Ser Ser Arg Pro Ser
 145 150 155 160

Cys

<210> 130
 <211> 326
 <212> PRT
 <213> Homo sapien

<400> 130

Leu Gln Val Pro Ala Val Pro Gly Thr Leu Arg Ala Pro Gly Thr Pro
 1 5 10 15

Phe Pro Arg Val Pro Arg Pro Ser Leu Pro Ala Pro Pro Thr Trp
 20 25 30

Leu Arg Gly Gln Pro Glu Arg Thr Arg Pro Glu Ala Ala Val Gly Glu
 35 40 45

Pro Ala Val Gly Leu Asp Ala Gly Ala Thr Asp Met Gly Glu Pro Gln
 50 55 60

Gly Ser Met Arg Ile Leu Val Thr Gly Gly Ser Gly Leu Val Gly Lys
 65 70 75 80

Ala Ile Gln Lys Val Val Ala Asp Gly Ala Gly Leu Pro Gly Glu Asp
 85 90 95

Trp Val Phe Val Ser Ser Lys Asp Ala Asp Leu Thr Asp Thr Ala Gln
 100 105 110

Thr Arg Ala Leu Phe Glu Lys Val Gln Pro Thr His Val Ile His Leu
 115 120 125

Ala Ala Met Val Gly Gly Leu Phe Arg Asn Ile Lys Tyr Asn Leu Asp
 130 135 140

187

Phe Trp Arg Lys Asn Val His Met Asn Asp Asn Val Leu His Ser Ala
 145 150 155 160

Phe Glu Val Gly Ala Arg Lys Val Val Ser Cys Leu Ser Thr Cys Ile
 165 170 175

Phe Pro Asp Lys Thr Thr Tyr Pro Ile Asp Glu Thr Met Ile His Asn
 180 185 190

Gly Pro Pro His Asn Ser Asn Phe Gly Tyr Ser Tyr Ala Lys Arg Met
 195 200 205

Ile Asp Val Gln Asn Arg Ala Tyr Phe Gln Gln Tyr Gly Cys Thr Phe
 210 215 220

Thr Ala Val Ile Pro Thr Asn Val Phe Gly Pro His Asp Asn Phe Asn
 225 230 235 240

Ile Glu Asp Gly His Val Leu Pro Gly Leu Ile His Lys Val His Leu
 245 250 255

Ala Lys Ser Ser Gly Ser Ala Leu Thr Val Trp Gly Thr Gly Asn Pro
 260 265 270

Arg Arg Gln Phe Ile Tyr Ser Leu Asp Leu Ala Gln Leu Phe Ile Trp
 275 280 285

Val Leu Arg Glu Tyr Asn Glu Val Glu Pro Ile Ile Leu Ser Gly Gly
 290 295 300

Tyr Leu Ser Pro Gln Pro Pro Ser Ser Met Val Gly Gln Asp Pro Arg
 305 310 315 320

Leu Ser Trp Glu Ala Gly
 325

<210> 131

<211> 216

<212> PRT

<213> Homo sapien

<400> 131

Met Gln Val Arg Thr Asp Pro Arg Ser Arg Gln Cys Trp Pro Leu Glu
 1 5 10 15

His Arg Thr Trp Leu Thr Asp Ser His Ser Ser Cys Leu Phe Pro Leu
 20 25 30

Pro Leu Glu Gln Pro Ser Leu Leu Gln Ser Asn Pro Cys Pro Ser Phe
35 40 45

Leu Pro Leu Ser Arg Ala Ala Pro Pro Ala His Leu Arg Pro Gly Pro
50 55 60

Ser Tyr Leu Leu Pro Leu Leu Ser Cys Pro Ile Pro Val Val Arg Arg
65 70 75 80

Glu Ser Thr Gly Gln Arg Pro Ser Ser Thr Cys Asp Leu Gly Glu Cys
85 90 95

Gln Ala Ser Pro Arg Gly Pro Gly Pro Arg Gly Pro Gly Arg Leu Cys
100 105 110

Cys Gly Gly Ser Arg Val Arg Thr Gly Ala Ala Ser Pro Leu Ala Val
115 120 125

Cys Leu Cys Pro Leu His Trp Pro Leu Glu Ala Gln Arg Pro Ser Gly
130 135 140

Tyr Phe Pro Ser Ser Gly Leu Pro Leu Met Leu Phe Pro Ala Pro Phe
145 150 155 160

Phe Tyr Leu Glu Thr Pro Ile Pro Ser His Pro Leu Gln Arg Ser Ser
165 170 175

Gln Ser Cys Pro Gln His Gly Ser Leu His Ser Pro Trp Val Ser Pro
180 185 190

Pro Val Ser Cys Leu Pro Arg Thr Pro Asp Leu Pro Leu Pro Gly Trp
195 200 205

Pro Arg Trp Ile Leu Tyr Ser Asp
210 215

<210>	132
<211>	108
<212>	PRT
<213>	Homo sapien

<400> 132

Met Ala His Ala Thr Leu Ser Ala Ala Pro Ser Asn Pro Arg Leu Leu
1 5 10 15

189

Arg Val Ala Leu Leu Leu Leu Leu Val Ala Ala Ser Arg Arg Ala
 20 25 30

Ala Gly Gly Ser Arg Arg Pro Gly Val Pro Gly Pro Asp Ala Ala Gly
 35 40 45

Val Gly Ala Pro Arg Arg Thr Ala Pro Leu Asn Gln Arg Val Tyr Ser
 50 55 60

Ser Leu Gly Ala Ser Val Val Thr Glu Leu Arg Cys Gln Cys Leu Gln
 65 70 75 80

Thr Leu Gln Gly Ile His Leu Lys Asn Ile Gln Ser Val Asn Val Arg
 85 90 95

Ser Pro Gly Pro His Cys Ala Gln Thr Glu Val Met
 100 105

<210> 133
 <211> 142
 <212> PRT
 <213> Homo sapien

<400> 133

Lys Gly Ser Pro Ile Leu Gly Ser His Thr Ala Arg Val Ala Gly Thr
 1 5 10 15

Ser Pro Pro Ala Leu Pro Leu Leu Ala Gln Leu Pro Asp Ala Ser Ala
 20 25 30

Glu Pro His Gly Pro Arg His Ala Leu Arg Arg Pro Gln Gln Ser Pro
 35 40 45

Ala Pro Ala Gly Gly Ala Ala Ala Pro Ala Pro Gly Gly Arg Gln Pro
 50 55 60

Ala Arg Ser Arg Trp Val Pro Ala Pro Trp Gly Pro Arg Ala Gly Arg
 65 70 75 80

Gly Trp Gly Gly Arg Pro Ala Pro Thr Ala Pro Leu Asn Gln Arg Val
 85 90 95

Tyr Ser Ser Leu Gly Ala Ser Val Val Thr Glu Leu Arg Cys Gln Cys
 100 105 110

Leu Gln Thr Leu Gln Gly Ile His Leu Lys Asn Ile Gln Ser Val Asn
 115 120 125

190

Val Arg Ser Pro Gly Pro His Cys Ala Gln Thr Glu Val Met
 130 135 140

<210> 134
 <211> 482
 <212> PRT
 <213> Homo sapien

<400> 134

Met Val Met Glu Lys Pro Ser Pro Leu Leu Val Gly Arg Glu Phe Val
 1 5 10 15

Arg Gln Tyr Tyr Thr Leu Leu Asn Lys Ala Pro Glu Tyr Leu His Arg
 20 25 30

Phe Tyr Gly Arg Asn Ser Ser Tyr Val His Gly Gly Val Asp Ala Ser
 35 40 45

Gly Lys Pro Gln Glu Ala Val Tyr Gly Gln Asn Asp Ile His His Lys
 50 55 60

Val Leu Ser Leu Asn Phe Ser Glu Cys His Thr Lys Ile Arg His Val
 65 70 75 80

Asp Ala His Ala Thr Leu Ser Asp Gly Val Val Val Gln Val Met Gly
 85 90 95

Leu Leu Ser Asn Ser Gly Gln Pro Glu Arg Lys Phe Met Gln Thr Phe
 100 105 110

Val Leu Ala Pro Glu Gly Ser Val Pro Asn Lys Phe Tyr Val His Asn
 115 120 125

Asp Met Phe Arg Tyr Glu Asp Glu Val Phe Gly Asp Ser Glu Pro Glu
 130 135 140

Leu Asp Glu Glu Ser Glu Asp Glu Val Glu Glu Glu Gln Glu Glu Arg
 145 150 155 160

Gln Pro Ser Pro Glu Pro Val Gln Glu Asn Ala Asn Ser Gly Tyr Tyr
 165 170 175

Glu Ala His Pro Val Thr Asn Gly Ile Glu Glu Pro Leu Glu Glu Ser
 180 185 190

191

Ser His Glu Pro Glu Pro Glu Pro Glu Ser Glu Thr Lys Thr Glu Glu
 195 200 205

Leu Lys Pro Gln Val Glu Glu Lys Asn Leu Glu Glu Leu Glu Glu Lys
 210 215 220

Ser Thr Thr Pro Pro Pro Ala Glu Pro Val Ser Leu Pro Gln Glu Pro
 225 230 235 240

Pro Lys Ala Phe Ser Trp Ala Ser Val Thr Ser Lys Asn Leu Pro Pro
 245 250 255

Ser Gly Thr Val Ser Ser Ser Gly Ile His Pro Met Leu Lys His Gln
 260 265 270

Ser His Ser Gln Glu Ser Lys Leu Asn Gln Lys Phe Asn Leu Ser His
 275 280 285

Leu Val Cys Val Asn Asn Asp Leu Glu Asn Asp Leu Val Phe Leu Leu
 290 295 300

Glu Asp Gln Asp Gln Ala Glu Glu Ile Met Glu Gln Asn Asp Ser Asp
 305 310 315 320

Asn Arg Arg Ile Ile Arg Tyr Pro Asp Ser His Gln Leu Phe Val Gly
 325 330 335

Asn Leu Pro His Asp Ile Asp Glu Asn Glu Leu Lys Glu Phe Phe Met
 340 345 350

Ser Phe Gly Asn Val Val Glu Leu Arg Ile Asn Thr Lys Gly Val Gly
 355 360 365

Gly Lys Leu Pro Asn Phe Gly Phe Val Val Phe Asp Asp Ser Glu Pro
 370 375 380

Val Gln Arg Ile Leu Ile Ala Lys Pro Ile Met Phe Arg Gly Glu Val
 385 390 395 400

Arg Leu Asn Val Glu Glu Lys Lys Thr Arg Ala Ala Arg Glu Arg Glu
 405 410 415

Thr Arg Gly Gly Gly Asp Asp Arg Arg Asp Ile Arg Arg Asn Asp Arg
 420 425 430

Gly Pro Gly Gly Pro Arg Gly Ile Val Gly Gly Gly Met Met Arg Asp

192

435

440

445

Arg Asp Gly Arg Gly Pro Pro Pro Arg Gly Gly Met Ala Gln Lys Leu
 450 455 460

Gly Ser Gly Arg Gly Thr Gly Gln Met Glu Gly Arg Phe Thr Gly Gln
 465 470 475 480

Arg Arg

<210> 135

<211> 392

<212> PRT

<213> Homo sapien

<400> 135

Leu Ser Arg Ser Trp Val Cys Cys Leu Thr Val Asp Asn Gln Lys Glu
 1 5 10 15

Ser Leu Cys Lys Pro Leu Phe Trp Leu Leu Lys Asp Leu Phe Gln Ile
 20 25 30

Asn Phe Met Phe Thr Met Ile Cys Phe Val Met Lys Met Lys Cys Tyr
 35 40 45

Gly Asp Ser Glu Pro Glu Leu Asp Glu Glu Ser Glu Asp Glu Val Glu
 50 55 60

Glu Glu Gln Glu Glu Arg Gln Pro Ser Pro Glu Pro Val Gln Glu Asn
 65 70 75 80

Ala Asn Ser Gly Tyr Tyr Glu Ala His Pro Val Thr Asn Gly Ile Glu
 85 90 95

Glu Pro Leu Glu Glu Ser Ser His Glu Pro Glu Pro Glu Pro Glu Ser
 100 105 110

Glu Thr Lys Thr Glu Glu Leu Lys Pro Gln Val Glu Glu Lys Asn Leu
 115 120 125

Glu Glu Leu Glu Glu Lys Ser Thr Thr Pro Pro Pro Ala Glu Pro Val
 130 135 140

Ser Leu Pro Gln Glu Pro Pro Lys Ala Phe Ser Trp Ala Ser Val Thr
 145 150 155 160

193

Ser Lys Asn Leu Pro Pro Ser Gly Thr Val Ser Ser Ser Gly Ile Pro
 165 170 175

Pro His Val Lys Ala Pro Val Ser Gln Pro Arg Val Glu Ala Lys Pro
 180 185 190

Glu Val Gln Ser Gln Pro Pro Arg Val Arg Glu Gln Arg Pro Arg Glu
 195 200 205

Arg Pro Gly Phe Pro Pro Arg Gly Pro Arg Pro Gly Arg Gly Asp Met
 210 215 220

Glu Gln Asn Asp Ser Asp Asn Arg Arg Ile Ile Arg Tyr Pro Asp Ser
 225 230 235 240

His Gln Leu Phe Val Gly Asn Leu Pro His Asp Ile Asp Glu Asn Glu
 245 250 255

Leu Lys Glu Phe Phe Met Ser Phe Gly Asn Val Val Glu Leu Arg Ile
 260 265 270

Asn Thr Lys Gly Val Gly Gly Lys Leu Pro Asn Phe Gly Phe Val Val
 275 280 285

Phe Asp Asp Ser Glu Pro Val Gln Arg Ile Leu Ile Ala Lys Pro Ile
 290 295 300

Met Phe Arg Gly Glu Val Arg Leu Asn Val Glu Glu Lys Lys Thr Arg
 305 310 315 320

Ala Ala Arg Glu Arg Glu Thr Arg Gly Gly Gly Asp Asp Arg Arg Asp
 325 330 335

Ile Arg Arg Asn Asp Arg Gly Pro Gly Gly Pro Arg Gly Ile Val Gly
 340 345 350

Gly Gly Met Met Arg Asp Arg Asp Gly Arg Gly Pro Pro Pro Arg Gly
 355 360 365

Gly Met Ala Gln Lys Leu Gly Ser Gly Arg Gly Thr Gly Gln Met Glu
 370 375 380

Gly Arg Phe Thr Gly Gln Arg Arg
 385 390

194

<210> 136

<211> 316

<212> PRT

<213> Homo sapien

<400> 136

Asp Trp Glu Glu Lys Arg Val Leu Ala Ile Cys Leu Ala Ser Gln Ser
 1 5 10 15

Glu Asp Glu Val Glu Glu Glu Gln Glu Glu Arg Gln Pro Ser Pro Glu
 20 25 30

Pro Val Gln Glu Asn Ala Asn Ser Gly Tyr Tyr Glu Ala His Pro Val
 35 40 45

Thr Asn Gly Ile Glu Glu Pro Leu Glu Glu Ser Ser His Glu Pro Glu
 50 55 60

Pro Glu Pro Glu Ser Glu Thr Lys Thr Glu Glu Leu Lys Pro Gln Val
 65 70 75 80

Glu Glu Lys Asn Leu Glu Glu Leu Glu Glu Lys Ser Thr Thr Pro Pro
 85 90 95

Pro Ala Glu Pro Val Ser Leu Pro Gln Glu Pro Pro Lys Pro Arg Val
 100 105 110

Glu Ala Lys Pro Glu Val Gln Ser Gln Pro Pro Arg Val Arg Glu Gln
 115 120 125

Arg Pro Arg Glu Arg Pro Gly Phe Pro Pro Arg Gly Pro Arg Pro Gly
 130 135 140

Arg Gly Asp Met Glu Gln Asn Asp Ser Asp Asn Arg Arg Ile Ile Arg
 145 150 155 160

Tyr Pro Asp Ser His Gln Leu Phe Val Gly Asn Leu Pro His Asp Ile
 165 170 175

Asp Glu Asn Glu Leu Lys Glu Phe Phe Met Ser Phe Gly Asn Val Val
 180 185 190

Glu Leu Arg Ile Asn Thr Lys Gly Val Gly Gly Lys Leu Pro Asn Phe
 195 200 205

Gly Phe Val Val Phe Asp Asp Ser Glu Pro Val Gln Arg Ile Leu Ile
 210 215 220

195

Ala Lys Pro Ile Met Phe Arg Gly Glu Val Arg Leu Asn Val Glu Glu
 225 230 235 240

Lys Lys Thr Arg Ala Ala Arg Glu Arg Glu Thr Arg Gly Gly Gly Asp
 245 250 255

Asp Arg Arg Asp Ile Arg Arg Asn Asp Arg Gly Pro Gly Gly Pro Arg
 260 265 270

Gly Ile Val Gly Gly Gly Met Met Arg Asp Arg Asp Gly Arg Gly Pro
 275 280 285

Pro Pro Arg Gly Gly Met Ala Gln Lys Leu Gly Ser Gly Arg Gly Thr
 290 295 300

Gly Gln Met Glu Gly Arg Phe Thr Gly Gln Arg Arg
 305 310 315

<210> 137
 <211> 314
 <212> PRT
 <213> Homo sapien
 <220>
 <221> MISC_FEATURE
 <222> (4)..(4)
 <223> X=any amino acid

<400> 137

Leu Gly Gly Xaa Glu Ser Gln Leu Leu Leu Ala Ser Gln Ser Glu Asp
 1 5 10 15

Glu Val Glu Glu Glu Gln Glu Glu Arg Gln Pro Ser Pro Glu Pro Val
 20 25 30

Gln Glu Asn Ala Asn Ser Gly Tyr Tyr Glu Ala His Pro Val Thr Asn
 35 40 45

Gly Ile Glu Glu Pro Leu Glu Glu Ser Ser His Glu Pro Glu Pro Glu
 50 55 60

Pro Glu Ser Glu Thr Lys Thr Glu Glu Leu Lys Pro Gln Val Glu Glu
 65 70 75 80

Lys Asn Leu Glu Glu Leu Glu Glu Lys Ser Thr Thr Pro Pro Pro Ala
 85 90 95

196

Glu Pro Val Ser Leu Pro Gln Glu Pro Pro Lys Pro Arg Val Glu Ala
 100 105 110

Lys Pro Glu Val Gln Ser Gln Pro Pro Arg Val Arg Glu Gln Arg Pro
 115 120 125

Arg Glu Arg Pro Gly Phe Pro Pro Arg Gly Pro Arg Pro Gly Arg Gly
 130 135 140

Asp Met Glu Gln Asn Asp Ser Asp Asn Arg Arg Ile Ile Arg Tyr Pro
 145 150 155 160

Asp Ser His Gln Leu Phe Val Gly Asn Leu Pro His Asp Ile Asp Glu
 165 170 175

Asn Glu Leu Lys Glu Phe Phe Met Ser Phe Gly Asn Val Val Glu Leu
 180 185 190

Arg Ile Asn Thr Lys Gly Val Gly Gly Lys Leu Pro Asn Phe Gly Phe
 195 200 205

Val Val Phe Asp Asp Ser Glu Pro Val Gln Arg Ile Leu Ile Ala Lys
 210 215 220

Pro Ile Met Phe Arg Gly Glu Val Arg Leu Asn Val Glu Glu Lys Lys
 225 230 235 240

Thr Arg Ala Ala Arg Glu Arg Glu Thr Arg Gly Gly Gly Asp Asp Arg
 245 250 255

Arg Asp Ile Arg Arg Asn Asp Arg Gly Pro Gly Gly Pro Arg Gly Ile
 260 265 270

Val Gly Gly Gly Met Met Arg Asp Arg Asp Gly Arg Gly Pro Pro Pro
 275 280 285

Arg Gly Gly Met Ala Gln Lys Leu Gly Ser Gly Arg Gly Thr Gly Gln
 290 295 300

Met Glu Gly Arg Phe Thr Gly Gln Arg Arg
 305 310

<210> 138

<211> 169

<212> PRT

197

<213> Homo sapien

<400> 138

Met Glu Gln Asn Asp Ser Asp Asn Arg Arg Ile Ile Arg Tyr Pro Asp
 1 5 10 15

Ser His Gln Leu Phe Val Gly Asn Leu Pro His Asp Ile Asp Glu Asn
 20 25 30

Glu Leu Lys Glu Phe Phe Met Ser Phe Gly Asn Val Val Glu Leu Arg
 35 40 45

Ile Asn Thr Lys Gly Val Gly Gly Lys Leu Pro Asn Phe Gly Phe Val
 50 55 60

Val Phe Asp Asp Ser Glu Pro Val Gln Arg Ile Leu Ile Ala Lys Pro
 65 70 75 80

Ile Met Phe Arg Gly Glu Val Arg Leu Asn Val Glu Glu Lys Lys Thr
 85 90 95

Arg Ala Ala Arg Glu Arg Glu Thr Arg Gly Gly Gly Asp Asp Arg Arg
 100 105 110

Asp Ile Arg Arg Asn Asp Arg Gly Pro Gly Gly Pro Arg Gly Ile Val
 115 120 125

Gly Gly Gly Met Met Arg Asp Arg Asp Gly Arg Gly Pro Pro Pro Arg
 130 135 140

Gly Gly Met Ala Gln Lys Leu Gly Ser Gly Arg Gly Thr Gly Gln Met
 145 150 155 160

Glu Gly Arg Phe Thr Gly Gln Arg Arg
 165

<210> 139

<211> 147

<212> PRT

<213> Homo sapien

<400> 139

Met Gly Arg Val Arg Thr Lys Thr Val Lys Lys Ala Ala Arg Val Ile
 1 5 10 15

Ile Glu Lys Tyr Tyr Thr Arg Leu Gly Asn Asp Phe His Thr Asn Lys
 20 25 30

198

Arg Val Cys Glu Glu Ile Ala Ile Ile Pro Ser Lys Lys Leu Arg Asn
 35 40 45

Lys Ile Ala Gly Tyr Val Thr His Leu Met Lys Arg Ile Gln Arg Gly
 50 55 60

Pro Val Arg Gly Ile Ser Ile Lys Leu Gln Glu Glu Glu Arg Glu Arg
 65 70 75 80

Arg Asp Asn Tyr Val Pro Glu Val Ser Ala Leu Asp Gln Glu Ile Ile
 85 90 95

Glu Val Asp Pro Asp Thr Lys Glu Met Leu Lys Leu Leu Asp Phe Gly
 100 105 110

Ser Leu Ser Asn Leu Gln Val Ile His Pro Asn Cys Arg Leu Ser Asp
 115 120 125

Leu Lys Val Gly Gln Thr Ala Val Gly Met Asn Phe Lys Thr Pro Arg
 130 135 140

Gly Pro Val
 145

<210> 140
 <211> 166
 <212> PRT
 <213> Homo sapien

<220>
 <221> MISC_FEATURE
 <222> (129)..(129)
 <223> X=any amino acid

<220>
 <221> MISC_FEATURE
 <222> (134)..(134)
 <223> X=any amino acid

<400> 140

Ala Leu Thr Gly Phe Ala Cys Ala Ser Cys Phe Leu Phe Tyr Gln Gly
 1 5 10 15

Pro Ala Asn Met Gly Arg Val Arg Thr Lys Thr Val Lys Lys Ala Ala
 20 25 30

199

Arg Val Ile Ile Glu Lys Tyr Tyr Thr Arg Leu Gly Asn Asp Phe His
 35 40 45

Thr Asn Lys Arg Val Cys Glu Glu Ile Ala Ile Ile Pro Ser Lys Lys
 50 55 60

Leu Arg Asn Lys Ile Ala Gly Tyr Val Thr His Leu Met Lys Arg Ile
 65 70 75 80

Gln Arg Gly Pro Val Arg Gly Ile Ser Ile Lys Leu Gln Glu Glu Glu
 85 90 95

Arg Glu Arg Arg Asp Asn Tyr Val Pro Glu Val Ser Ala Leu Asp Gln
 100 105 110

Glu Ile Ile Glu Val Asp Pro Asp Thr Lys Glu Met Leu Lys Leu Leu
 115 120 125

Xaa Phe Gly Ser Leu Xaa Asn Leu Gln Val Ile His Pro Asn Cys Arg
 130 135 140

Leu Ser Asp Leu Lys Val Gly Gln Thr Ala Val Gly Met Asn Phe Lys
 145 150 155 160

Thr Pro Arg Gly Pro Val
 165

<210> 141
 <211> 254
 <212> PRT
 <213> Homo sapien

<400> 141

Met Ser Val Asn Ala Ile Arg Lys Gln Ser Thr Asp Glu Glu Val Thr
 1 5 10 15

Ser Leu Ala Lys Ser Leu Ile Lys Ser Trp Lys Lys Leu Leu Asp Gly
 20 25 30

Pro Ser Thr Glu Lys Asp Leu Asp Glu Lys Lys Lys Glu Pro Ala Ile
 35 40 45

Thr Ser Gln Asn Ser Pro Glu Ala Arg Glu Glu Ser Thr Ser Ser Gly
 50 55 60

Asn Val Ser Asn Arg Lys Asp Glu Thr Asn Ala Arg Asp Thr Tyr Val
 65 70 75 80

200

Ser Ser Phe Pro Arg Ala Pro Ser Thr Ser Asp Ser Val Arg Leu Lys
85 90 95

Cys Arg Glu Met Leu Ala Ala Ala Leu Arg Thr Gly Asp Asp Tyr Ile
100 105 110

Ala Ile Gly Ala Asp Glu Glu Glu Leu Gly Ser Gln Ile Glu Glu Ala
115 120 125

Ile Tyr Gln Glu Ile Arg Asn Thr Asp Met Lys Tyr Lys Asn Arg Val
130 135 140

Arg Ser Arg Ile Ser Asn Leu Lys Asp Ala Lys Asn Pro Asn Leu Arg
145 150 155 160

Lys Asn Val Leu Cys Gly Asn Ile Pro Pro Asp Leu Phe Ala Arg Met
165 170 175

Thr Ala Glu Glu Met Ala Ser Asp Glu Leu Lys Glu Met Arg Lys Asn
180 185 190

Leu Thr Lys Glu Ala Ile Arg Glu His Gln Met Ala Lys Thr Gly Gly
195 200 205

Thr Gln Thr Asp Leu Phe Thr Cys Gly Lys Cys Lys Lys Lys Asn Cys
210 215 220

Thr Tyr Thr Gln Val Gln Thr Arg Ser Ala Asp Glu Pro Met Thr Thr
225 230 235 240

Phe Val Val Cys Asn Glu Cys Gly Asn Arg Trp Lys Phe Cys
245 250

<210> 142

<211> 302

<212> PRT

<213> Homo sapien

<400> 142

Arg Gly Leu Asn Val Arg Leu Val Ile Ser Thr Val Leu His Val Cys
1 5 10 15

Leu Ala Ile Lys Asn Ala Ala Gly Ala Leu Asp Leu Leu Lys Glu Leu
20 25 30

201

Lys Asn Ile Pro Met Thr Leu Glu Leu Leu Gln Ser Thr Arg Ile Gly
 35 40 45

Met Ser Val Asn Ala Ile Arg Lys Gln Ser Thr Asp Glu Glu Val Thr
 50 55 60

Ser Leu Ala Lys Ser Leu Ile Lys Ser Trp Lys Lys Leu Leu Asp Gly
 65 70 75 80

Pro Ser Thr Glu Lys Asp Leu Asp Glu Lys Lys Lys Glu Pro Ala Ile
 85 90 95

Thr Ser Gln Asn Ser Pro Glu Ala Arg Glu Glu Ser Thr Ser Ser Gly
 100 105 110

Asn Val Ser Asn Arg Lys Asp Glu Thr Asn Ala Arg Asp Thr Tyr Val
 115 120 125

Ser Ser Phe Pro Arg Ala Pro Ser Thr Ser Asp Ser Val Arg Leu Lys
 130 135 140

Cys Arg Glu Met Leu Ala Ala Ala Leu Arg Thr Gly Asp Asp Tyr Ile
 145 150 155 160

Ala Ile Gly Ala Asp Glu Glu Glu Leu Gly Ser Gln Ile Glu Glu Ala
 165 170 175

Ile Tyr Gln Glu Ile Arg Asn Thr Asp Met Lys Tyr Lys Asn Arg Val
 180 185 190

Arg Ser Arg Ile Ser Asn Leu Lys Asp Ala Lys Asn Pro Asn Leu Arg
 195 200 205

Lys Asn Val Leu Cys Gly Asn Ile Pro Pro Asp Leu Phe Ala Arg Met
 210 215 220

Thr Ala Glu Glu Met Ala Ser Asp Glu Leu Lys Glu Met Arg Lys Asn
 225 230 235 240

Leu Thr Lys Glu Ala Ile Arg Glu His Gln Met Ala Lys Thr Gly Gly
 245 250 255

Thr Gln Thr Asp Leu Phe Thr Cys Gly Lys Cys Lys Lys Lys Asn Cys
 260 265 270

Thr Tyr Thr Gln Val Gln Thr Arg Ser Ala Asp Glu Pro Met Thr Thr

202

275

280

285

Phe Val Val Cys Asn Glu Cys Gly Asn Arg Trp Lys Phe Cys
 290 295 300

<210> 143

<211> 225

<212> PRT

<213> Homo sapien

<400> 143

Met Val Ser His Ser Glu Leu Arg Lys Leu Phe Tyr Ser Ala Asp Ala
 1 5 10 15

Val Cys Phe Asp Val Asp Ser Thr Val Ile Arg Glu Glu Gly Ile Asp
 20 25 30

Glu Leu Ala Lys Ile Cys Gly Val Glu Asp Ala Val Ser Glu Met Thr
 35 40 45

Arg Arg Ala Met Gly Gly Ala Val Pro Phe Lys Ala Ala Leu Thr Glu
 50 55 60

Arg Leu Ala Leu Ile Gln Pro Ser Arg Glu Gln Val Gln Arg Leu Ile
 65 70 75 80

Ala Glu Gln Pro Pro His Leu Thr Pro Gly Ile Arg Glu Leu Val Ser
 85 90 95

Arg Leu Gln Glu Arg Asn Val Gln Val Phe Leu Ile Ser Gly Gly Phe
 100 105 110

Arg Ser Ile Val Glu His Val Ala Ser Lys Leu Asn Ile Pro Ala Thr
 115 120 125

Asn Val Phe Ala Asn Arg Leu Lys Phe Tyr Phe Asn Gly Glu Tyr Ala
 130 135 140

Gly Phe Asp Glu Thr Gln Pro Thr Ala Glu Ser Gly Gly Lys Gly Lys
 145 150 155 160

Val Ile Lys Leu Leu Lys Glu Lys Phe His Phe Lys Lys Ile Ile Met
 165 170 175

Ile Gly Asp Gly Ala Thr Asp Met Glu Ala Cys Pro Pro Ala Asp Ala
 180 185 190

203

Phe Ile Gly Phe Gly Gly Asn Val Ile Arg Gln Gln Val Lys Asp Asn
 195 200 205

Ala Lys Trp Tyr Ile Thr Asp Phe Val Glu Leu Leu Gly Glu Leu Glu
 210 215 220

Glu
 225

<210> 144
 <211> 249
 <212> PRT
 <213> Homo sapien

<400> 144

Met Lys Gln Thr Asn Ile Gln Lys Asn Thr Asn Thr Arg Asp Thr Ser
 1 5 10 15

Lys Lys Thr Lys Asp Gln Leu Ile Ile Asp Ala Gly Gln Lys His Phe
 20 25 30

Gly Ala Thr Val Cys Lys Ser Cys Gly Met Ile Tyr Thr Ala Ser Asn
 35 40 45

Pro Glu Asp Glu Met Gln His Val Gln His His His Arg Phe Leu Glu
 50 55 60

Gly Ile Lys Tyr Val Gly Trp Lys Lys Glu Arg Val Val Ala Glu Phe
 65 70 75 80

Trp Asp Gly Lys Ile Val Leu Val Leu Pro His Asp Pro Ser Phe Ala
 85 90 95

Ile Lys Lys Val Glu Asp Val Gln Glu Leu Val Asp Asn Glu Leu Gly
 100 105 110

Phe Gln Gln Val Val Pro Lys Cys Pro Asn Lys Ile Lys Thr Phe Leu
 115 120 125

Phe Ile Ser Asp Glu Lys Arg Val Val Gly Cys Leu Ile Ala Glu Pro
 130 135 140

Ile Lys Gln Ala Phe Arg Val Leu Ser Glu Pro Ile Gly Pro Glu Ser
 145 150 155 160

Pro Ser Ser Thr Glu Cys Pro Arg Ala Trp Gln Cys Ser Asp Val Pro

204

165 170 175

Glu Pro Ala Val Cys Gly Ile Ser Arg Ile Trp Val Phe Arg Leu Lys
180 185 190

Arg Arg Lys Arg Ile Ala Arg Arg Leu Val Asp Thr Leu Arg Asn Cys
195 200 205

Phe Met Phe Gly Cys Phe Leu Ser Thr Asp Glu Ile Ala Phe Ser Asp
210 215 220

Pro Thr Pro Asp Gly Lys Leu Phe Ala Thr Lys Tyr Cys Asn Thr Pro
225 230 235 240

Asn Phe Leu Val Tyr Asn Phe Asn Ser
245

<210> 145
<211> 113
<212> PRT
<213> Homo sapien

<400> 145

Met Lys Ser Phe Ser Lys Ser Ser Asn Lys Cys Thr Leu Asn Thr Ser
1 5 10 15

Thr Val Arg Glu Phe Leu Ser Phe Arg Met Asn Ala Ile His Thr Lys
20 25 30

Glu Leu Leu Leu Thr Ser His Leu Gln Ser Pro Pro Gly His Arg Gln
35 40 45

Asp Pro Phe Asn Lys Ser Ser Ser Glu Thr Pro Ile Val Gln Asn Leu
50 55 60

Gln Leu Ala Thr Gly Tyr His His Ser Leu Trp Leu Cys Lys Ile Lys
65 70 75 80

Asp Leu Glu Glu Gly Trp Gly Gly Gly Ser Tyr Glu Lys Arg Gln Glu
85 90 95

Lys Ser Ser Phe Asp Pro Met Leu Ser Glu Ser Val His Glu Glu Glu
100 105 110

Ser

205

<210> 146
 <211> 102
 <212> PRT
 <213> Homo sapien

<400> 146

Met Val Thr Glu Glu Lys Arg Ser Glu Ala Arg Glu Asn Glu Arg Ser
 1 5 10 15

Leu Ala Phe Val Lys Met Val Gly His His Val Ala Phe Leu Glu Ala
 20 25 30

Asp Val Leu Gln Ala Glu Arg Asp His Gly Ala Phe Pro Gln Ala Leu
 35 40 45

Arg Arg Trp Leu Gly Ser Ala Gly Leu Pro Ser Phe Arg Asn Lys Ser
 50 55 60

Pro Ala Pro Val Pro Val Thr Tyr Glu Leu Pro Thr Leu Tyr Arg Thr
 65 70 75 80

Glu Asp Tyr Phe Pro Val Asp Ala Gly Glu Ala Gln His His Pro Arg
 85 90 95

Thr Cys Pro Arg Pro Leu
 100

<210> 147
 <211> 412
 <212> PRT
 <213> Homo sapien

<400> 147

Met Thr His Arg Arg Phe Lys Val Thr Ser Thr Val Ala Ala Ala Ser
 1 5 10 15

Leu Leu Pro Leu Gln Asp Glu Lys Glu Val Leu Leu Cys Lys Pro Ala
 20 25 30

Trp Leu Ser Pro Ser Gly Thr Arg Thr Gly Gly Phe Leu Ala Val Pro
 35 40 45

Gly Pro Pro Leu Arg Ala Lys Gly Pro Pro Val Leu Trp Pro Pro Pro
 50 55 60

Ala His Pro Pro Arg Val Pro Gly Arg Glu His Ser Arg Trp Gly Arg
 65 70 75 80

206

Ser Pro Pro Ala Gln Arg Ala Ala Leu Gly Leu Arg Pro Tyr Leu Leu
85 90 95

Leu Leu Leu Pro Pro Ala Gln Leu Phe Asn Val Tyr Pro Trp Leu Gly
100 105 110

Ala Leu Leu Gln Leu His Arg Pro Val Leu Arg Lys Ile Glu Glu Val
115 120 125

Arg Ala Ile Leu Arg Thr Leu Leu Glu Ala Arg Arg Pro His Val Cys
130 135 140

Pro Gly Asp Pro Val Cys Ser Tyr Val Asp Ala Leu Ile Gln Gln Gly
145 150 155 160

Gln Gly Asp Asp Pro Glu Gly Leu Phe Ala Glu Ala Asn Ala Val Ala
165 170 175

Cys Thr Leu Asp Met Val Met Ala Gly Thr Glu Thr Thr Ser Ala Thr
180 185 190

Leu Gln Trp Ala Ala Leu Leu Met Gly Arg His Pro Asp Val Gln Gly
195 200 205

Glu Thr Pro Ala Pro Gly Glu Thr Ala Pro Ser Ala Pro Gly Gly Pro
210 215 220

Pro Gly Thr Arg Asp Gly Ala Ala Thr Gln Ala Ala Gln Pro Phe Ala
225 230 235 240

Pro Gly Arg Val Gln Glu Glu Leu Asp Arg Val Leu Gly Pro Gly Arg
245 250 255

Thr Pro Arg Leu Glu Asp Gln Gln Ala Leu Pro Tyr Thr Ser Ala Val
260 265 270

Leu His Glu Val Gln Arg Phe Ile Thr Leu Leu Pro His Val Pro Arg
275 280 285

Cys Thr Ala Ala Asp Thr Gln Leu Gly Gly Phe Leu Leu Pro Lys Gly
290 295 300

Thr Pro Val Ile Pro Leu Leu Thr Ser Val Leu Leu Asp Glu Thr Gln
305 310 315 320

Trp Gln Thr Pro Gly Gln Phe Asn Pro Gly His Phe Leu Asp Ala Asn
325 330 335

Gly His Phe Val Lys Arg Glu Ala Phe Leu Pro Phe Ser Ala Gly Arg
340 345 350

Arg Val Cys Val Gly Glu Arg Leu Ala Arg Thr Glu Leu Phe Leu Leu
355 360 365

Phe Ala Gly Leu Leu Gln Arg Tyr Arg Leu Leu Pro Pro Pro Gly Val
370 375 380

Ser Pro Ala Ser Leu Asp Thr Thr Pro Ala Arg Ala Phe Thr Met Arg
385 390 395 400

Pro Arg Ala Gln Ala Leu Cys Ala Val Pro Arg Pro
405 410

<210>	148
<211>	203
<212>	PRT
<213>	Homo sapien

<400> 148

Asp Pro Gly Ala Trp Arg Asp Gly Ser Phe Cys Pro Arg Gly Thr Pro
1 5 10 15

Arg Asp Glu Gly Trp Arg Cys His Pro Ser Gly Pro Pro Phe Ala Pro
20 25 30

Gly Arg Val Gln Glu Glu Leu Asp Arg Val Leu Gly Pro Gly Arg Thr
35 40 45

Pro Arg Leu Glu Asp Gln Gln Ala Leu Pro Tyr Thr Ser Ala Val Leu
50 55 60

His Glu Val Gln Arg Phe Ile Thr Leu Leu Pro His Val Pro Arg Cys
65 70 75 80

Thr Ala Ala Asp Thr Gln Leu Gly Gly Phe Leu Leu Pro Lys Gly Thr
85 90 95

Pro Val Ile Pro Leu Leu Thr Ser Val Leu Leu Asp Glu Thr Gln Trp
100 105 110

Gln Thr Pro Gly Gln Phe Asn Pro Gly His Phe Leu Asp Ala Asn Gly

208

115

120

125

His Phe Val Lys Arg Glu Ala Phe Leu Pro Phe Ser Ala Gly Arg Arg
 130 135 140

Val Cys Val Gly Glu Arg Leu Ala Arg Thr Glu Leu Phe Leu Leu Phe
 145 150 155 160

Ala Gly Leu Leu Gln Arg Tyr Arg Leu Leu Pro Pro Pro Gly Val Ser
 165 170 175

Pro Ala Ser Leu Asp Thr Thr Pro Ala Arg Ala Phe Thr Met Arg Pro
 180 185 190

Arg Ala Gln Ala Leu Cys Ala Val Pro Arg Pro
 195 200

<210> 149

<211> 116

<212> PRT

<213> Homo sapien

<400> 149

Met Ala Arg Asp Ile Val Ala Met Ser Arg Ala Met Cys Leu Met Leu
 1 5 10 15

Leu Ser Val Ala Arg Ala Phe Leu Leu Met Val Val Arg Thr Glu Glu
 20 25 30

Val Ala Gly Phe Arg Trp Pro Asp Leu Arg Phe Asn Asp His His Asp
 35 40 45

Thr Phe Ala Val Gly Cys Arg Leu His Ala His Ser Leu Ala Val Asn
 50 55 60

Gln Ser Val Val Ala Glu Gly Ile Ala Gly Pro Gln Val Ile Gly Leu
 65 70 75 80

Ser Ala Val Val Phe Gly Leu Ser Phe Glu Asn Met Glu Asn Trp Ser
 85 90 95

Ser Ser Ala Arg Pro Ile Gln Leu Leu Met Pro Glu His Arg Tyr Ala
 100 105 110

Asp Ile Arg Gln
 115

209

<210> 150

<211> 141

<212> PRT

<213> Homo sapien

<400> 150

Gly Glu Arg Pro Leu Ser Trp Ser Pro Leu Gly Arg Gly His Leu Cys
 1 5 10 15

Leu Val Pro Leu Gly Gly Arg Arg Gly Ala Cys Ala Gly Lys Ser Arg
 20 25 30

Arg Pro Arg Trp Ala Asp His Glu Val Arg Ser Ser Arg Pro Ala Trp
 35 40 45

Pro Thr Trp His Thr Trp His Ala His Arg Gly Asp Val Ala Cys His
 50 55 60

Val Ser Asp Ala Ala Glu Arg Gly Ala Ser Ile Leu Val Asp Gly Gly
 65 70 75 80

Pro His Ile Gly Gly Gly Arg Leu Pro Leu Ala Gly Ser Pro Leu Asn
 85 90 95

Asp His His Asp Thr Phe Ala Val Gly Cys Arg Leu His Ala His Ser
 100 105 110

Leu Ala Val Asn Gln Ser Val Val Ala Glu Gly Ile Ala Gly Pro Gln
 115 120 125

Val Ile Gly Leu Ser Ala Val Val Phe Gly Leu Ser Phe
 130 135 140

<210> 151

<211> 426

<212> PRT

<213> Homo sapien

<400> 151

Met Ser Pro Ala Pro Asp Ala Ala Pro Ala Pro Ala Ser Ile Ser Leu
 1 5 10 15

Phe Asp Leu Ser Ala Asp Ala Pro Val Phe Gln Gly Leu Ser Leu Val
 20 25 30

Ser His Ala Pro Gly Glu Ala Leu Ala Arg Ala Pro Arg Thr Ser Cys
 35 40 45

210

Ser Gly Ser Gly Glu Arg Glu Ser Pro Glu Arg Lys Leu Leu Gln Gly
 50 55 60

Pro Met Asp Ile Ser Glu Lys Leu Phe Cys Ser Thr Cys Asp Gln Thr
 65 70 75 80

Phe Gln Asn His Gln Glu Gln Arg Glu His Tyr Lys Leu Asp Trp His
 85 90 95

Arg Phe Asn Leu Lys Gln Arg Leu Lys Asp Lys Pro Leu Leu Ser Ala
 100 105 110

Leu Asp Phe Glu Lys Gln Ser Ser Thr Gly Asp Leu Ser Ser Ile Ser
 115 120 125

Gly Ser Glu Asp Ser Asp Ser Ala Ser Glu Glu Asp Leu Gln Thr Leu
 130 135 140

Asp Arg Glu Arg Ala Thr Phe Glu Lys Leu Ser Arg Pro Pro Gly Phe
 145 150 155 160

Tyr Pro His Arg Val Leu Phe Gln Asn Ala Gln Gly Gln Phe Leu Tyr
 165 170 175

Ala Tyr Arg Cys Val Leu Gly Pro His Gln Asp Pro Pro Glu Glu Ala
 180 185 190

Glu Leu Leu Leu Gln Asn Leu Gln Ser Arg Gly Pro Arg Asp Cys Val
 195 200 205

Val Leu Met Ala Ala Ala Gly His Phe Ala Gly Ala Ile Phe Gln Gly
 210 215 220

Arg Glu Val Val Thr His Lys Thr Phe His Arg Tyr Thr Val Arg Ala
 225 230 235 240

Lys Arg Gly Thr Ala Gln Gly Leu Arg Asp Ala Arg Gly Gly Pro Ser
 245 250 255

His Ser Ala Gly Ala Asn Leu Arg Arg Tyr Asn Glu Ala Thr Leu Tyr
 260 265 270

Lys Asp Val Arg Asp Leu Leu Ala Gly Pro Ser Trp Ala Lys Ala Leu
 275 280 285

211

Glu Glu Ala Gly Thr Ile Leu Leu Arg Ala Pro Arg Ser Gly Arg Ser
 290 295 300

Leu Phe Phe Gly Gly Lys Gly Ala Pro Leu Gln Arg Gly Asp Pro Arg
 305 310 315 320

Leu Trp Asp Ile Pro Leu Ala Thr Arg Arg Pro Thr Phe Gln Glu Leu
 325 330 335

Gln Arg Val Leu His Lys Leu Thr Thr Leu His Val Tyr Glu Glu Asp
 340 345 350

Pro Arg Glu Ala Val Arg Leu His Ser Pro Gln Thr His Trp Lys Thr
 355 360 365

Val Arg Glu Glu Arg Lys Lys Pro Thr Glu Glu Glu Ile Arg Lys Ile
 370 375 380

Cys Arg Asp Glu Lys Glu Ala Leu Gly Gln Asn Glu Glu Ser Pro Lys
 385 390 395 400

Gln Gly Leu Ile Thr Ile Trp Gln Leu Ser Asp Leu Ser Phe Cys Pro
 405 410 415

Lys Asn Ala Leu Ala Asn Ser Leu Leu Ser
 420 425

<210> 152
 <211> 370
 <212> PRT
 <213> Homo sapien

<400> 152

Met Ser Pro Ala Pro Asp Ala Ala Pro Ala Pro Ala Ser Ile Ser Leu
 1 5 10 15

Phe Asp Leu Ser Ala Asp Ala Pro Val Phe Gln Gly Leu Ser Leu Arg
 20 25 30

Glu His Tyr Lys Leu Asp Trp His Arg Phe Asn Leu Lys Gln Arg Leu
 35 40 45

Lys Asp Lys Pro Leu Leu Ser Ala Leu Asp Phe Glu Lys Gln Ser Ser
 50 55 60

Thr Gly Asp Leu Ser Ser Ile Ser Gly Ser Glu Asp Ser Asp Ser Ala

212

65		70		75		80									
Ser	Glu	Glu	Asp	Leu	Gln	Thr	Leu	Asp	Arg	Glu	Arg	Ala	Thr	Phe	Glu
				85					90					95	
Lys	Leu	Ser	Arg	Pro	Pro	Gly	Phe	Tyr	Pro	His	Arg	Val	Leu	Phe	Gln
			100					105					110		
Asn	Ala	Gln	Gly	Gln	Phe	Leu	Tyr	Ala	Tyr	Arg	Cys	Val	Leu	Gly	Pro
		115						120					125		
His	Gln	Asp	Pro	Pro	Glu	Glu	Ala	Glu	Leu	Leu	Leu	Gln	Asn	Leu	Gln
		130				135					140				
Ser	Arg	Gly	Pro	Arg	Asp	Cys	Val	Val	Leu	Met	Ala	Ala	Ala	Gly	His
145					150					155					160
Phe	Ala	Gly	Ala	Ile	Phe	Gln	Gly	Arg	Glu	Val	Val	Thr	His	Lys	Thr
				165					170					175	
Phe	His	Arg	Tyr	Thr	Val	Arg	Ala	Lys	Arg	Gly	Thr	Ala	Gln	Gly	Leu
			180					185					190		
Arg	Asp	Ala	Arg	Gly	Gly	Pro	Ser	His	Ser	Ala	Gly	Ala	Asn	Leu	Arg
		195				200						205			
Arg	Tyr	Asn	Glu	Ala	Thr	Leu	Tyr	Lys	Asp	Val	Arg	Asp	Leu	Leu	Ala
210						215					220				
Gly	Pro	Ser	Trp	Ala	Lys	Ala	Leu	Glu	Glu	Ala	Gly	Thr	Ile	Leu	Leu
225					230					235				240	
Arg	Ala	Pro	Arg	Ser	Gly	Arg	Ser	Leu	Phe	Phe	Gly	Gly	Lys	Gly	Ala
				245					250					255	
Pro	Leu	Gln	Arg	Gly	Asp	Pro	Arg	Leu	Trp	Asp	Ile	Pro	Leu	Ala	Thr
			260					265					270		
Arg	Arg	Pro	Thr	Phe	Gln	Glu	Leu	Gln	Arg	Val	Leu	His	Lys	Leu	Thr
		275				280						285			
Thr	Leu	His	Val	Tyr	Glu	Glu	Asp	Pro	Arg	Glu	Ala	Val	Arg	Leu	His
290						295					300				
Ser	Pro	Gln	Thr	His	Trp	Lys	Thr	Val	Arg	Glu	Glu	Arg	Lys	Lys	Pro
305					310					315				320	

Thr Glu Glu Glu Ile Arg Lys Ile Cys Arg Asp Glu Lys Glu Ala Leu
325 330 335

Gly Gln Asn Glu Glu Ser Pro Lys Gln Gly Leu Ile Thr Ile Trp Gln
340 345 350

Leu Ser Asp Leu Ser Phe Cys Pro Lys Asn Ala Leu Ala Asn Ser Leu
355 360 365

Leu Ser
370

```
<210> 153
<211> 208
<212> PRT
<213> Homo sapien
```

<400> 153

Met Ser Pro Ala Pro Asp Ala Ala Pro Ala Pro Ala Ser Ile Ser Leu
1 5 10 15

Phe Asp Leu Ser Ala Asp Ala Pro Val Phe Gln Gly Leu Ser Leu Val
20 25 30

Ser His Ala Pro Gly Glu Ala Leu Ala Arg Ala Pro Arg Thr Ser Cys
35 40 45

Ser Gly Ser Gly Glu Arg Glu Ser Pro Glu Arg Lys Leu Leu Gln Gly
50 55 60

Pro Met Asp Ile Ser Glu Lys Leu Phe Cys Ser Thr Cys Asp Gln Thr
65 70 75 80

Phe Gln Asn His Gln Glu Gln Arg Glu His Tyr Lys Leu Asp Trp His
85 90 95

Arg Phe Asn Leu Lys Gln Arg Leu Lys Asp Lys Pro Leu Leu Ser Ala
100 105 110

Leu Asp Phe Glu Lys Gln Ser Ser Thr Gly Asp Leu Ser Ser Ile Ser
115 120 125

Gly Ser Glu Asp Ser Asp Ser Ala Ser Glu Glu Asp Leu Gln Thr Leu
130 135 140

214

Asp Arg Glu Arg Ala Thr Phe Glu Lys Leu Ser Arg Pro Pro Gly Phe
 145 150 155 160

Tyr Pro His Arg Val Leu Phe Gln Asn Ala Gln Gly Gln Phe Leu Tyr
 165 170 175

Ala Tyr Arg Cys Val Leu Gly Pro His Gln Arg Gln Val Thr Val Gln
 180 185 190

Val Ala Trp Leu Thr Pro Ala Phe Cys Thr Pro Ser Leu Asp Phe Pro
 195 200 205

<210> 154

<211> 209

<212> PRT

<213> Homo sapien

<400> 154

Trp Thr Gln Leu Leu Met Cys Tyr Phe Tyr Leu Gly Asp Lys Ile Lys
 1 5 10 15

Thr Ile Ser Phe Gln Ala Phe Ile Leu Met His Leu Leu Leu Pro Ser
 20 25 30

Glu Tyr Ser Leu Asp Gly Phe His Met Ser Gly Phe Ser Leu Gly Ser
 35 40 45

Gly Ser Glu Gly Glu Asp Gly Phe Gln Val Glu Leu Glu Leu Val Glu
 50 55 60

Leu Thr Val Gly Thr Leu Asp Leu Cys Glu Ser Glu Val Leu Pro Lys
 65 70 75 80

Arg Arg Arg Arg Lys Arg Asn Lys Lys Glu Lys Ser Arg Asp Gln Glu
 85 90 95

Ala Gly Ala His Arg Thr Leu Leu Gln Gln Thr Gln Glu Glu Glu Pro
 100 105 110

Ser Thr Gln Ser Ser Gln Ala Val Ala Ala Pro Leu Gly Pro Leu Leu
 115 120 125

Asp Glu Ala Lys Ala Pro Gly Gln Pro Glu Leu Trp Asn Ala Leu Leu
 130 135 140

Ala Ala Cys Arg Ala Gly Asp Val Gly Val Leu Lys Leu Gln Leu Ala
 145 150 155 160

215

Pro Ser Pro Ala Asp Pro Arg Val Leu Ser Leu Leu Ser Ala Pro Leu
 165 170 175

Gly Ser Gly Gly Phe Thr Leu Leu His Ala Ala Ala Ala Ala Gly Arg
 180 185 190

Gly Ser Val Val Arg Leu Leu Leu Glu Ala Gly Ala Asp Pro Thr Val
 195 200 205

Gln

<210> 155
 <211> 125
 <212> PRT
 <213> Homo sapien

<400> 155

Met Ser Pro Ala Pro Asp Ala Ala Pro Ala Pro Ala Ser Ile Ser Leu
 1 5 10 15

Phe Asp Leu Ser Ala Asp Ala Pro Val Phe Gln Gly Leu Ser Leu Val
 20 25 30

Ser His Ala Pro Gly Glu Ala Leu Ala Arg Ala Pro Arg Thr Ser Cys
 35 40 45

Ser Gly Ser Gly Glu Arg Glu Ser Pro Glu Arg Lys Leu Leu Gln Gly
 50 55 60

Pro Met Asp Ile Ser Glu Lys Leu Phe Cys Ser Thr Cys Asp Gln Thr
 65 70 75 80

Phe Gln Asn His Gln Glu Gln Arg Glu His Tyr Lys Leu Asp Trp His
 85 90 95

Arg Phe Asn Leu Lys Gln Arg Leu Lys Asp Lys Pro Leu Leu Ser Ala
 100 105 110

Leu Asp Phe Glu Lys Gln Ser Ser Thr Gly Asp Glu Trp
 115 120 125

<210> 156
 <211> 191
 <212> PRT
 <213> Homo sapien

216

<400> 156

Glu Pro Ser Leu Asp Arg Pro Gly Asp Asp Gln Leu Val Leu Gly Gly
 1 5 10 15

Gly Leu Cys Arg Val Glu Gly Ser Gln Val Pro Val Pro Ala Leu Ser
 20 25 30

Pro Ala Thr Ala Pro Thr Ser Phe Glu Gly Pro Phe Gly Lys Ile Val
 35 40 45

His Gln Val Arg Ala Ala Ile His Thr Pro Arg Phe Ser Lys Asp His
 50 55 60

Lys Cys Ser Leu Val Phe Tyr Ile Leu Ser Pro His Phe Leu Asp Pro
 65 70 75 80

Val Phe Leu Ser Thr Lys Ser His Ser Gln Arg Gln Pro Leu Leu Ala
 85 90 95

Thr Leu Ser Ser Val Pro Gly Ala Pro Glu Pro Cys Pro Gln Asp Gly
 100 105 110

Ser Pro Ala Ser His Pro Leu His Pro Pro Leu Cys Ile Ser Thr Gly
 115 120 125

Ala Thr Val Pro Tyr Phe Ala Glu Gly Ser Gly Gly Pro Val Pro Thr
 130 135 140

Thr Ser Thr Leu Ile Leu Pro Pro Glu Tyr Ser Ser Trp Gly Tyr Pro
 145 150 155 160

Tyr Gly Glu Ser Thr Ala Arg Ala Trp Gln Gly Gly Asp Ala Lys Ser
 165 170 175

Pro Thr Gln Thr Leu Leu Ser Ser Arg Arg Gly Pro Thr Val Leu
 180 185 190

<210> 157

<211> 130

<212> PRT

<213> Homo sapien

<400> 157

Met Gly Cys Leu Leu Thr Gly Leu Pro Arg Thr Leu Pro Arg Trp Cys
 1 5 10 15

217

Cys Leu Ala Pro Gly Arg Ile Pro Val Leu Ala Ala Ser Arg Gly Leu
 20 25 30

Gly Arg Arg Leu Ala Gly Ala His Ala Ala Ile Pro Phe Ala Ala Ile
 35 40 45

Arg Val Thr Cys Ile Gly Ser Cys Gly Val Ser Asn Lys Ala Asn Asp
 50 55 60

Thr Ala Trp Val Val Glu Glu Gly Tyr Phe Asn Ser Ser Leu Ser Leu
 65 70 75 80

Ala Asp Lys Gly Lys Phe Gly Ser Gln Phe Pro Ser Gly Asp Pro Trp
 85 90 95

Gly Gln Pro Leu Glu Trp Gly Leu Ser Val Leu Ser Ser Pro Phe Pro
 100 105 110

Arg Ser Ala Ser Trp Ile Trp His Trp Pro Ile Leu Ser Gln Gly Cys
 115 120 125

Gly Pro
 130

<210> 158
 <211> 340
 <212> PRT
 <213> Homo sapien

<400> 158

Pro Gly Glu Ala His Phe Arg Glu Asp His Trp Pro Ala Ala Gly Pro
 1 5 10 15

Thr Arg Arg Arg Ser Ser Arg Pro Gly Val Pro Leu Gln Gly Ala Glu
 20 25 30

Glu Asp Gly Ala Leu Trp Lys Gly Ala Arg Gly Phe Asn Gly Val Gln
 35 40 45

Leu Phe Glu Gly Met Lys Ala Phe Lys Gly Lys Asp Gln Gln Val Arg
 50 55 60

Leu Phe Arg Pro Trp Leu Asn Met Asp Arg Met Leu Arg Ser Ala Met
 65 70 75 80

Arg Leu Cys Leu Pro Ser Phe Asp Lys Leu Glu Leu Leu Glu Cys Ile

218

85	90	95
----	----	----

Arg Arg Leu Ile Glu Val Asp Lys Asp Trp Val Pro Asp Ala Ala Gly
 100 105 110

Thr Ser Leu Tyr Val Arg Pro Val Leu Ile Gly Asn Glu Pro Ser Leu
 115 120 125

Gly Val Ser Gln Pro Thr Arg Ala Leu Leu Phe Val Ile Leu Cys Pro
 130 135 140

Val Gly Ala Tyr Phe Pro Gly Gly Ser Val Thr Pro Val Ser Leu Leu
 145 150 155 160

Ala Asp Pro Ala Phe Ile Arg Ala Trp Val Gly Gly Val Gly Asn Tyr
 165 170 175

Lys Leu Gly Gly Asn Tyr Gly Pro Thr Val Leu Val Gln Gln Glu Ala
 180 185 190

Leu Lys Arg Gly Cys Glu Gln Val Leu Trp Leu Tyr Gly Pro Asp His
 195 200 205

Gln Leu Thr Glu Val Gly Thr Met Asn Ile Phe Val Tyr Trp Thr His
 210 215 220

Glu Asp Gly Val Leu Glu Leu Val Thr Pro Pro Leu Asn Gly Val Ile
 225 230 235 240

Leu Pro Gly Val Val Arg Gln Ser Leu Leu Asp Met Ala Gln Thr Trp
 245 250 255

Gly Glu Phe Arg Val Val Glu Arg Thr Ile Thr Met Lys Gln Leu Leu
 260 265 270

Arg Ala Leu Glu Glu Gly Arg Val Arg Glu Val Phe Gly Ser Gly Thr
 275 280 285

Ala Cys Gln Val Cys Pro Val His Arg Ile Leu Tyr Lys Asp Arg Asn
 290 295 300

Leu His Ile Pro Thr Met Glu Asn Gly Pro Glu Leu Ile Leu Arg Phe
 305 310 315 320

Gln Lys Glu Leu Lys Glu Ile Gln Tyr Gly Ile Arg Ala His Glu Trp
 325 330 335

219

Met Phe Pro Val
340

<210> 159
<211> 306
<212> PRT
<213> Homo sapien

<400> 159

Met Ala Pro Phe Gly Lys Glu His Glu Ala Leu Met Gly Glu Leu Phe
1 5 10 15

Glu Gly Met Lys Ala Phe Lys Gly Lys Asp Gln Gln Val Arg Leu Phe
20 25 30

Arg Pro Trp Leu Asn Met Asp Arg Met Leu Arg Ser Ala Met Arg Leu
35 40 45

Cys Leu Pro Ser Phe Asp Lys Leu Glu Leu Leu Glu Cys Ile Arg Arg
50 55 60

Leu Ile Glu Val Asp Lys Asp Trp Val Pro Asp Ala Ala Gly Thr Ser
65 70 75 80

Leu Tyr Val Arg Pro Val Leu Ile Gly Asn Glu Pro Ser Leu Gly Val
85 90 95

Ser Gln Pro Thr Arg Ala Leu Leu Phe Val Ile Leu Cys Pro Val Gly
100 105 110

Ala Tyr Phe Pro Gly Gly Ser Val Thr Pro Val Ser Leu Leu Ala Asp
115 120 125

Pro Ala Phe Ile Arg Ala Trp Val Gly Gly Val Gly Asn Tyr Lys Leu
130 135 140

Gly Gly Asn Tyr Gly Pro Thr Val Leu Val Gln Gln Glu Ala Leu Lys
145 150 155 160

Arg Gly Cys Glu Gln Val Leu Trp Leu Tyr Gly Pro Asp His Gln Leu
165 170 175

Thr Glu Val Gly Thr Met Asn Ile Phe Val Tyr Trp Thr His Glu Asp
180 185 190

220

Gly Val Leu Glu Leu Val Thr Pro Pro Leu Asn Gly Val Ile Leu Pro
 195 200 205

Gly Val Val Arg Gln Ser Leu Leu Asp Met Ala Gln Thr Trp Gly Glu
 210 215 220

Phe Arg Val Val Glu Arg Thr Ile Thr Met Lys Gln Leu Leu Arg Ala
 225 230 235 240

Leu Glu Glu Gly Arg Val Arg Glu Val Phe Gly Ser Gly Thr Ala Cys
 245 250 255

Gln Val Cys Pro Val His Arg Ile Leu Tyr Lys Asp Arg Asn Leu His
 260 265 270

Ile Pro Thr Met Glu Asn Gly Pro Glu Leu Ile Leu Arg Phe Gln Lys
 275 280 285

Glu Leu Lys Glu Ile Gln Tyr Gly Ile Arg Ala His Glu Trp Met Phe
 290 295 300

Pro Val
 305

<210> 160
 <211> 485
 <212> PRT
 <213> Homo sapien

<400> 160

Gln Ile Val Tyr Leu Tyr Ile Gln Arg Ile Ile Arg Val Phe His Gly
 1 5 10 15

Val Asn Ala Pro Asp Asn Pro Leu Lys Glu Glu His Leu Val Gln Leu
 20 25 30

Asn Glu Thr Asp Ile Leu Arg Val Leu Asp Gly Asn Thr Gly Gly Thr
 35 40 45

Tyr Gly Gly His Ile Pro Gly Ser Asp Arg Ala Gly Leu Asn Arg His
 50 55 60

Asp Lys Ser Glu Asn Pro Gly Arg Ile Tyr Ala Gly Gly Ser Ser Thr
 65 70 75 80

Ala Ala Gly Asp Pro Ser Leu Leu Ser Ala Ala Arg Ile Met Ala Ala
 85 90 95

221

Ala Ala Leu Gly Gln Ile Trp Ala Arg Lys Leu Leu Ser Val Pro Trp
100 105 110

Leu Leu Cys Gly Pro Arg Arg Tyr Ala Ser Ser Ser Phe Lys Ala Ala
115 120 125

Asp Leu Gln Leu Glu Met Thr Gln Lys Pro His Lys Lys Pro Gly Pro
130 135 140

Gly Glu Pro Leu Val Phe Gly Lys Thr Phe Thr Asp His Met Leu Met
145 150 155 160

Val Glu Trp Asn Asp Lys Gly Trp Gly Gln Pro Arg Ile Gln Pro Phe
165 170 175

Gln Asn Leu Thr Leu His Pro Ala Ser Ser Ser Leu His Tyr Ser Leu
180 185 190

Gln Leu Phe Glu Gly Met Lys Ala Phe Lys Gly Lys Asp Gln Gln Val
195 200 205

Arg Leu Phe Arg Pro Trp Leu Asn Met Asp Arg Met Leu Arg Ser Ala
210 215 220

Met Arg Leu Cys Leu Pro Ser Phe Asp Lys Leu Glu Leu Leu Glu Cys
225 230 235 240

Ile Arg Arg Leu Ile Glu Val Asp Lys Asp Trp Val Pro Asp Ala Ala
245 250 255

Gly Thr Ser Leu Tyr Val Arg Pro Val Leu Ile Gly Asn Glu Pro Ser
260 265 270

Leu Gly Val Ser Gln Pro Thr Arg Ala Leu Leu Phe Val Ile Leu Cys
275 280 285

Pro Val Gly Ala Tyr Phe Pro Gly Gly Ser Val Thr Pro Val Ser Leu
290 295 300

Leu Ala Asp Pro Ala Phe Ile Arg Ala Trp Val Gly Gly Val Gly Asn
305 310 315 320

Tyr Lys Leu Gly Gly Asn Tyr Gly Pro Thr Val Leu Val Gln Gln Glu
325 330 335

222

Ala Leu Lys Arg Gly Cys Glu Gln Val Leu Trp Leu Tyr Gly Pro Asp
 340 345 350

His Gln Leu Thr Glu Val Gly Thr Met Asn Ile Phe Val Tyr Trp Thr
 355 360 365

His Glu Asp Gly Val Leu Glu Leu Val Thr Pro Pro Leu Asn Gly Val
 370 375 380

Ile Leu Pro Gly Val Val Arg Gln Ser Leu Leu Asp Met Ala Gln Thr
 385 390 395 400

Trp Val Arg Thr Trp His Leu Leu Val Met Gly Ala Met Cys Gln Gly
 405 410 415

Pro Gly His Gln Arg Ala Gly Thr Gly Ala His Trp His Val Ser Ala
 420 425 430

Pro Ser Pro Gly Ser Val Ser Pro Val Gly Pro Leu Ser Phe Ser Leu
 435 440 445

Ser Ser Gly Arg Glu Arg Trp Arg Ser Ala Ala Gly Gln Pro Ser Gly
 450 455 460

Asp Thr Cys Leu Cys Gln Leu Pro Cys Arg Val Ser Ser Gly Trp Trp
 465 470 475 480

Ser Ala Arg Ser Pro
 485

<210> 161
 <211> 465
 <212> PRT
 <213> Homo sapien

<400> 161

Met Ala Ala Ala Ala Leu Gly Gln Ile Trp Ala Arg Lys Leu Leu Ser
 1 5 10 15

Val Pro Trp Leu Leu Cys Gly Pro Arg Arg Tyr Ala Ser Ser Ser Phe
 20 25 30

Lys Ala Ala Asp Leu Gln Leu Glu Met Thr Gln Lys Pro His Lys Lys
 35 40 45

Pro Gly Pro Gly Glu Pro Leu Val Phe Gly Lys Thr Phe Thr Asp His

223

50	55	60
Met Leu Met Val Glu Trp Asn Asp Lys Gly Trp Gly Gln Pro Arg Ile		
65	70	75 80
Gln Pro Phe Gln Asn Leu Thr Leu His Pro Ala Ser Ser Ser Leu His		
	85	90 95
Tyr Ser Leu Gln Leu Phe Glu Gly Met Lys Ala Phe Lys Gly Lys Asp		
	100	105 110
Gln Gln Val Arg Leu Phe Arg Pro Trp Leu Asn Met Asp Arg Met Leu		
	115	120 125
Arg Ser Ala Met Arg Leu Cys Leu Pro Ser Phe Asp Lys Leu Glu Leu		
	130	135 140
Leu Glu Cys Ile Arg Arg Leu Ile Glu Val Asp Lys Asp Trp Val Pro		
	145	150 155 160
Asp Ala Ala Gly Thr Ser Leu Tyr Val Arg Pro Val Leu Ile Gly Asn		
	165	170 175
Glu Pro Ser Leu Gly Val Ser Gln Pro Thr Arg Ala Leu Leu Phe Val		
	180	185 190
Ile Leu Cys Pro Val Gly Ala Tyr Phe Pro Gly Gly Ser Val Thr Pro		
	195	200 205
Val Ser Leu Leu Ala Asp Pro Ala Phe Ile Arg Ala Trp Val Gly Gly		
	210	215 220
Val Gly Asn Tyr Lys Leu Gly Gly Asn Tyr Gly Pro Thr Val Leu Val		
	225	230 235 240
Gln Gln Glu Ala Leu Lys Arg Gly Cys Glu Gln Val Leu Trp Leu Tyr		
	245	250 255
Gly Pro Asp His Gln Leu Thr Glu Val Gly Thr Met Asn Ile Phe Val		
	260	265 270
Tyr Trp Thr His Glu Asp Gly Val Leu Glu Leu Val Thr Pro Pro Leu		
	275	280 285
Asn Gly Val Ile Leu Pro Gly Val Val Arg Gln Ser Leu Leu Asp Met		
	290	295 300

224

Ala Gln Thr Trp Val Glu Asp Met Ala Ser Ser Gly Asp Gly Arg His
305 310 315 320

Val Pro Gly Ala Arg Ala Ser Glu Gly Trp Asp Trp Gly Thr Leu Ala
325 330 335

Cys Leu Cys Pro Phe Ser Trp Val Cys Leu Ser Arg Trp Ala Ser Val
340 345 350

Phe Leu Thr Ile Leu Arg Glu Gly Glu Val Glu Val Cys Ser Arg Ala
355 360 365

Thr Leu Trp Gly His Val Ser Leu Pro Thr Ala Leu Gln Gly Glu Phe
370 375 380

Arg Val Val Glu Arg Thr Ile Thr Met Lys Gln Leu Leu Arg Ala Leu
385 390 395 400

Glu Glu Gly Arg Val Arg Glu Val Phe Gly Ser Gly Thr Ala Cys Gln
405 410 415

Val Cys Pro Val His Arg Ile Leu Tyr Lys Asp Arg Asn Leu His Ile
420 425 430

Pro Thr Met Glu Asn Gly Pro Glu Leu Ile Leu Arg Phe Gln Lys Glu
435 440 445

Leu Lys Glu Ile Gln Tyr Gly Ile Arg Ala His Glu Trp Met Phe Pro
450 455 460

Val
465

<210> 162
<211> 74
<212> PRT
<213> Homo sapien

<220>
<221> MISC_FEATURE
<222> (3)..(5)
<223> X=any amino acid

<220>
<221> MISC_FEATURE
<222> (8)..(10)
<223> X=any amino acid

225

<220>
 <221> MISC_FEATURE
 <222> (13)..(14)
 <223> X=any amino acid

<400> 162

Thr Leu Xaa Xaa Xaa Phe Asn Xaa Xaa Xaa Ser Ser Xaa Xaa Lys Ile
 1 5 10 15

Arg Lys Asn Thr Ala Ser Tyr Val Pro Lys Glu Lys Lys Ile Lys Gly
 20 25 30

Thr Met Pro Thr Cys Ser Thr Ile Lys Ala Ser Phe Ser Tyr Phe Phe
 35 40 45

Asn Thr Lys Tyr Lys Gln Arg Ile His Ile Leu Lys Thr Glu Leu Arg
 50 55 60

Ser Arg His Ala Val Leu Glu Thr Leu Gln
 65 70

<210> 163
 <211> 63
 <212> PRT
 <213> Homo sapien

<400> 163

Thr Arg Val Leu Gln Cys Ala Pro Arg Cys Ser Pro Asn Cys Val Ala
 1 5 10 15

Phe Thr Ala Ala Val Thr Val Pro Ala Cys Ile Tyr Ala Leu Phe Gly
 20 25 30

Pro Cys Glu His Thr Gly Ile Leu Val Ile Leu Pro Pro Met Glu Tyr
 35 40 45

Leu Trp Arg Ser Pro Val Phe Ile Tyr Phe Gly Ile Asn Pro Leu
 50 55 60

<210> 164
 <211> 313
 <212> PRT
 <213> Homo sapien

<400> 164

Met Lys Cys Glu His Cys Thr Arg Lys Glu Cys Ser Lys Lys Thr Lys

226

1	5	10	15
Thr Asp Asp Gln Glu Asn Val Ser Ala Asp Ala Pro Ser Pro Ala Gln	20	25	30
Glu Asn Gly Glu Lys Gly Glu Phe His Lys Leu Ala Asp Ala Lys Ile	35	40	45
Phe Leu Ser Asp Cys Leu Ala Cys Asp Ser Cys Met Thr Ala Glu Glu	50	55	60
Gly Val Gln Leu Ser Gln Gln Asn Ala Lys Asp Phe Phe Arg Val Leu	65	70	75
Asn Leu Asn Lys Lys Cys Asp Thr Ser Lys His Lys Val Leu Val Val	85	90	95
Ser Val Cys Pro Gln Ser Leu Pro Tyr Phe Ala Ala Lys Phe Asn Leu	100	105	110
Ser Val Thr Asp Ala Ser Arg Arg Leu Cys Gly Phe Leu Lys Ser Leu	115	120	125
Gly Val His Tyr Val Phe Asp Thr Thr Ile Ala Ala Asp Phe Ser Ile	130	135	140
Leu Glu Ser Gln Lys Glu Phe Val Arg Arg Tyr Arg Gln His Ser Glu	145	150	155
Glu Glu Arg Thr Leu Pro Met Leu Thr Ser Ala Cys Pro Gly Trp Val	165	170	175
Arg Tyr Ala Glu Arg Val Leu Gly Arg Pro Ile Thr Ala His Leu Cys	180	185	190
Thr Ala Lys Ser Pro Gln Gln Val Met Gly Ser Leu Val Lys Asp Tyr	195	200	205
Phe Ala Arg Gln Gln Asn Leu Ser Pro Glu Lys Ile Phe His Val Ile	210	215	220
Val Ala Pro Cys Tyr Asp Lys Lys Leu Glu Ala Leu Gln Glu Ser Leu	225	230	235
Pro Pro Ala Leu His Gly Ser Arg Gly Ala Asp Cys Val Leu Thr Ser	245	250	255

227

Gly Glu Ile Ala Gln Ile Met Glu Gln Gly Asp Leu Ser Val Arg Asp
 260 265 270

Ala Ala Val Asp Thr Leu Val Ser Gly Phe Ser Gly Glu Ser Pro Leu
 275 280 285

Gly Gly Arg Thr Ser Arg Gln Pro Cys Gln Pro Pro Ala Arg Pro Arg
 290 295 300

Ala Ala Leu Leu Tyr Asp Glu Ala Met
 305 310

<210> 165
 <211> 395
 <212> PRT
 <213> Homo sapien

<400> 165

Glu Pro Arg Val Arg Arg Val Ser Asn Ala Glu Leu Ala Asp Arg Ala
 1 5 10 15

Arg Pro Arg Pro Pro Arg Ala Gln Gly Pro Pro Gly Pro Val Thr Thr
 20 25 30

Gly Pro Ser Thr Leu Glu Arg Pro Gln Leu Gly Leu Gly Thr Val Arg
 35 40 45

Ala Leu Thr Asp Ser Leu Val Asn Ala Ala Trp Pro Pro Pro Pro Pro
 50 55 60

Gln Asp Pro Arg Glu Ala Glu Thr Gly Ala Arg Thr Arg Ser Pro Arg
 65 70 75 80

Arg Arg Thr Trp Ser Glu Pro Ala Ala Pro Pro Arg Ala Leu Arg Leu
 85 90 95

Ala Leu Gly Pro Gly Pro Pro Leu Pro Asp Thr Val Ile Gly Leu Gly
 100 105 110

Lys Ala Val Arg Val Gly Asn Pro Ile Gly Pro Gly Val Arg Leu Val
 115 120 125

Leu Ser Arg Cys Ser His Trp Pro Ser Ala Ala Val Gly Gly Glu Ala
 130 135 140

228

Ala Ser Gly Glu Asp Asn Lys Gly Pro Arg Ala Ala Gly Ser Gly Val
 145 150 155 160

Pro Val Ser Arg Cys Phe Pro Glu Ala Glu Ala Pro Gly Leu Pro Pro
 165 170 175

Ala Ala Leu Gln Met Lys Cys Glu His Cys Thr Arg Lys Glu Cys Ser
 180 185 190

Lys Lys Thr Lys Thr Asp Asp Gln Glu Asn Val Ser Ala Asp Ala Pro
 195 200 205

Ser Pro Ala Gln Glu Asn Gly Glu Lys Gly Glu Phe His Lys Leu Ala
 210 215 220

Asp Ala Lys Ile Phe Leu Ser Asp Cys Leu Ala Cys Asp Ser Cys Met
 225 230 235 240

Thr Ala Glu Glu Gly Val Gln Leu Ser Gln Gln Asn Ala Lys Asp Phe
 245 250 255

Phe Arg Val Leu Asn Leu Asn Lys Lys Cys Asp Thr Ser Lys His Lys
 260 265 270

Val Leu Val Val Ser Val Cys Pro Gln Ser Leu Pro Tyr Phe Ala Ala
 275 280 285

Lys Phe Asn Leu Ser Val Thr Asp Ala Ser Arg Arg Leu Cys Gly Phe
 290 295 300

Leu Lys Ser Leu Gly Val His Tyr Val Phe Asp Thr Thr Ile Ala Ala
 305 310 315 320

Asp Phe Ser Ile Leu Glu Ser Gln Lys Glu Phe Val Arg Arg Tyr Arg
 325 330 335

Gln His Ser Glu Glu Glu Arg Thr Leu Pro Met Leu Thr Ser Ala Cys
 340 345 350

Pro Gly Trp Val Arg Tyr Ala Glu Arg Val Leu Gly Arg Pro Ile Thr
 355 360 365

Ala His Leu Cys Thr Ala Lys Ser Pro Gln Gln Val Met Gly Ser Leu
 370 375 380

Val Lys Asp Tyr Phe Ala Arg Gln Gln Val Ser

229

385

390

395

<210> 166
 <211> 285
 <212> PRT
 <213> Homo sapien

<400> 166

Met Gly Ser Ala Phe Pro Val Leu Pro Gly Gly Ser Thr Gly Trp Gly
 1 5 10 15

Ala Leu Gln Met Phe Gly Arg Thr Thr Pro Ser Pro Glu Gly Gly Ser
 20 25 30

Arg Gln Thr Trp Met Glu Cys Trp Cys Ser Asn Leu Ser Pro Glu Lys
 35 40 45

Ile Phe His Val Ile Val Ala Pro Cys Tyr Asp Lys Lys Leu Glu Ala
 50 55 60

Leu Gln Glu Ser Leu Pro Pro Ala Leu His Gly Ser Arg Gly Ala Asp
 65 70 75 80

Cys Val Leu Thr Ser Gly Glu Ile Ala Gln Ile Met Glu Gln Gly Asp
 85 90 95

Leu Ser Val Arg Asp Ala Ala Val Asp Thr Leu Phe Gly Asp Leu Lys
 100 105 110

Glu Asp Lys Val Thr Arg His Asp Gly Ala Ser Ser Asp Gly His Leu
 115 120 125

Ala His Ile Phe Arg His Ala Ala Lys Glu Leu Phe Asn Glu Asp Val
 130 135 140

Glu Glu Val Thr Tyr Arg Ala Leu Arg Asn Lys Asp Phe Gln Glu Val
 145 150 155 160

Thr Leu Glu Lys Asn Gly Glu Val Val Leu Arg Phe Ala Ala Ala Tyr
 165 170 175

Gly Phe Arg Asn Ile Gln Asn Met Ile Leu Lys Leu Lys Lys Gly Lys
 180 185 190

Phe Pro Phe His Phe Val Glu Val Leu Ala Cys Ala Gly Gly Cys Leu
 195 200 205

230

Asn Gly Arg Gly Gln Ala Gln Thr Pro Asp Gly His Ala Asp Lys Ala
 210 215 220

Leu Leu Arg Gln Met Glu Gly Ile Tyr Ala Asp Ile Pro Val Arg Arg
 225 230 235 240

Pro Glu Ser Ser Ala His Val Gln Glu Leu Tyr Gln Glu Trp Leu Glu
 245 250 255

Gly Ile Asn Ser Pro Lys Ala Arg Glu Val Leu His Thr Thr Tyr Gln
 260 265 270

Ser Gln Glu Arg Gly Thr His Ser Leu Asp Ile Lys Trp
 275 280 285

<210> 167
 <211> 170
 <212> PRT
 <213> Homo sapien

<400> 167

Asp Ser Val Ser His Pro Ala Lys Lys Phe Ala Met Ser Ala Ala Lys
 1 5 10 15

Cys Lys Gln Ser Arg Leu Trp Val Lys Ala Leu Val Met Lys Asn Lys
 20 25 30

Lys Lys Lys Ile Pro Lys His Phe Leu Thr Leu Val Leu Lys Lys Thr
 35 40 45

Pro Ser Pro Lys Val Cys Phe Ser Phe Asn Phe Leu Asp Phe Ala Arg
 50 55 60

Leu Ser Gly Cys Lys Leu Pro Thr Leu Phe Trp Met Asp Arg Asp Lys
 65 70 75 80

Val Phe Lys Gln Arg Leu Cys Pro Leu His Lys Pro Phe Pro Pro Pro
 85 90 95

Pro Pro Gln Pro Pro Ala Ala Ile Ile Thr Gly Ala Val Lys Trp Leu
 100 105 110

Leu Ser Asp Gly His Thr Thr Arg Arg Gln Met Lys Arg Ser Gly Ser
 115 120 125

Lys Arg Gly Ser Ala Ser Gln Tyr Gln Pro Ala Val Pro Arg Gly Gly

231

130 135 140
 Ser Ala Gly Arg Thr Val Phe Pro Arg Gln Ala Ala Met Pro Pro Pro
 145 150 155 160

 Thr Ala Lys Ala Pro Lys Ala Thr Ser Val
 165 170

 <210> 168
 <211> 159
 <212> PRT
 <213> Homo sapien

 <400> 168
 Met Ser Ala Ala Lys Cys Lys Gln Ser Arg Leu Trp Val Lys Ala Leu
 1 5 10 15

 Val Met Lys Asn Lys Lys Lys Lys Ile Pro Lys His Phe Leu Thr Leu
 20 25 30

 Val Leu Lys Lys Thr Pro Ser Pro Lys Val Cys Phe Ser Phe Asn Phe
 35 40 45

 Leu Asp Phe Ala Arg Leu Ser Gly Cys Lys Leu Pro Thr Leu Phe Trp
 50 55 60

 Met Asp Arg Asp Lys Val Phe Lys Gln Arg Leu Cys Pro Leu His Lys
 65 70 75 80

 Pro Phe Pro Pro Pro Pro Pro Gln Pro Pro Ala Ala Ile Ile Thr Gly
 85 90 95

 Ala Val Lys Trp Leu Leu Ser Asp Gly His Thr Thr Arg Arg Gln Met
 100 105 110

 Lys Arg Ser Gly Ser Lys Arg Gly Ser Ala Ser Gln Tyr Gln Pro Ala
 115 120 125

 Val Pro Arg Gly Gly Ser Ala Gly Arg Thr Val Phe Pro Arg Gln Ala
 130 135 140

 Ala Met Pro Pro Pro Thr Ala Lys Ala Pro Lys Gly Asn Ile Arg
 145 150 155

 <210> 169
 <211> 170
 <212> PRT

232

<213> Homo sapien

<400> 169

Asp Ser Val Ser His Pro Ala Lys Lys Phe Ala Met Ser Ala Ala Lys
 1 5 10 15

Cys Lys Gln Ser Arg Leu Trp Val Lys Ala Leu Val Met Lys Asn Lys
 20 25 30

Lys Lys Lys Ile Pro Lys His Phe Leu Thr Leu Val Leu Lys Lys Thr
 35 40 45

Pro Ser Pro Lys Val Cys Phe Ser Phe Asn Phe Leu Asp Phe Ala Arg
 50 55 60

Leu Ser Gly Cys Lys Leu Pro Thr Leu Phe Trp Met Asp Arg Asp Lys
 65 70 75 80

Val Phe Lys Gln Arg Leu Cys Pro Leu His Lys Pro Phe Pro Pro Pro
 85 90 95

Pro Pro Gln Pro Pro Ala Ala Ile Ile Thr Gly Ala Val Lys Trp Leu
 100 105 110

Leu Ser Asp Gly His Thr Thr Arg Arg Gln Met Lys Arg Ser Gly Ser
 115 120 125

Lys Arg Gly Ser Ala Ser Gln Tyr Gln Pro Ala Val Pro Arg Gly Gly
 130 135 140

Ser Ala Gly Arg Thr Val Phe Pro Arg Gln Ala Ala Met Pro Pro Pro
 145 150 155 160

Thr Ala Lys Ala Pro Lys Ala Thr Ser Val
 165 170

<210> 170

<211> 255

<212> PRT

<213> Homo sapien

<400> 170

Gln Leu Leu Arg Asp Pro Asn Val Ala Leu Glu Leu Ser Ala Met Cys
 1 5 10 15

Ser Thr Val Pro Trp Arg Arg Thr Leu Arg Glu Gly Gln Pro Cys His
 20 25 30

233

Leu Ser Leu Pro His His His Ser Pro Pro Pro Ile Lys Leu Gln Ser
 35 40 45

Gly Cys Trp Thr Pro Leu Gly Ala Val Ser Ala His His Pro Leu Cys
 50 55 60

Ala Ala Thr Trp Ser Gln Ala His Cys Pro Leu Ala Gly Arg Gly Pro
 65 70 75 80

Ser Arg Arg Arg Cys Gly Leu His Arg Ala Pro Ser Thr Lys Glu Ser
 85 90 95

Ala Asn Ala Ser Ala Gly Pro Arg Ala Met Ala Ser Leu Pro Gln Leu
 100 105 110

Met Ala Ala Pro Thr Ser Ser Cys Thr Ser Leu Met Trp Lys Gly Ser
 115 120 125

Met Ser Gln Trp Lys Ala Thr Arg Ser Pro Ile Lys Cys Ala Pro Ser
 130 135 140

His Pro Arg Met Arg Ser Cys Arg Pro Trp Arg Ser Ser Ser Leu Thr
 145 150 155 160

Trp His Gln Ala Pro Ser Met Arg Pro Gly Leu Asp Met Ser Ser Ala
 165 170 175

Pro Arg Arg Trp Trp Lys His Pro Leu Ser Cys Ala Cys Gly Arg Leu
 180 185 190

Cys Gly Glu Glu Ala Ala Asp Thr Gly Asp Asp Ile Leu Pro His Glu
 195 200 205

Thr Gly Leu Gln Pro Gly Met Val Pro Leu Lys Tyr Leu Leu Glu Glu
 210 215 220

Gly Val Trp Gly Ala Gly Val Gly Cys Gly Val Phe Pro Ala Ile Ser
 225 230 235 240

Thr Ala Tyr Asp His Cys Asn Asn Leu Ser Pro Ser Glu Glu His
 245 250 255

<210> 171
 <211> 147
 <212> PRT

234

<213> Homo sapien

<400> 171

Met Ser Ser Glu Pro Pro Pro Pro Pro Gln Pro Pro Thr His Gln Ala
 1 5 10 15

Ser Val Gly Leu Leu Asp Thr Pro Arg Ser Arg Glu Arg Ser Pro Ser
 20 25 30

Pro Leu Arg Gly Asn Val Val Pro Ser Pro Leu Pro Thr Arg Arg Thr
 35 40 45

Arg Thr Phe Ser Ala Thr Val Arg Ala Ser Gln Gly Pro Val Tyr Lys
 50 55 60

Gly Val Cys Lys Cys Phe Cys Arg Ser Lys Gly His Gly Phe Ile Thr
 65 70 75 80

Pro Ala Asp Gly Gly Pro Asp Ile Phe Leu His Ile Ser Asp Val Glu
 85 90 95

Gly Glu Tyr Val Pro Val Glu Gly Asp Glu Val Thr Tyr Lys Met Cys
 100 105 110

Ser Ile Pro Pro Lys Asn Glu Lys Leu Gln Ala Val Glu Val Val Ile
 115 120 125

Thr His Leu Ala Pro Gly Thr Lys His Glu Thr Trp Ser Gly His Val
 130 135 140

Ile Ser Ser
 145

<210> 172

<211> 255

<212> PRT

<213> Homo sapien

<400> 172

Gln Leu Leu Arg Asp Pro Asn Val Ala Leu Glu Leu Ser Ala Met Cys
 1 5 10 15

Ser Thr Val Pro Trp Arg Arg Thr Leu Arg Glu Gly Gln Pro Cys His
 20 25 30

Leu Ser Leu Pro His His His Ser Pro Pro Pro Ile Lys Leu Gln Ser
 35 40 45

235

Gly Cys Trp Thr Pro Leu Gly Ala Val Ser Ala His His Pro Leu Cys
 50 55 60

Ala Ala Thr Trp Ser Gln Ala His Cys Pro Leu Ala Gly Arg Gly Pro
 65 70 75 80

Ser Arg Arg Arg Cys Gly Leu His Arg Ala Pro Ser Thr Lys Glu Ser
 85 90 95

Ala Asn Ala Ser Ala Gly Pro Arg Ala Met Ala Ser Leu Pro Gln Leu
 100 105 110

Met Ala Ala Pro Thr Ser Ser Cys Thr Ser Leu Met Trp Lys Gly Ser
 115 120 125

Met Ser Gln Trp Lys Ala Thr Arg Ser Pro Ile Lys Cys Ala Pro Ser
 130 135 140

His Pro Arg Met Arg Ser Cys Arg Pro Trp Arg Ser Ser Ser Leu Thr
 145 150 155 160

Trp His Gln Ala Pro Ser Met Arg Pro Gly Leu Asp Met Ser Ser Ala
 165 170 175

Pro Arg Arg Trp Trp Lys His Pro Leu Ser Cys Ala Cys Gly Arg Leu
 180 185 190

Cys Gly Glu Glu Ala Ala Asp Thr Gly Asp Asp Ile Leu Pro His Glu
 195 200 205

Thr Gly Leu Gln Pro Gly Met Val Pro Leu Lys Tyr Leu Leu Glu Glu
 210 215 220

Gly Val Trp Gly Ala Gly Val Gly Cys Gly Val Phe Pro Ala Ile Ser
 225 230 235 240

Thr Ala Tyr Asp His Cys Asn Asn Leu Ser Pro Ser Glu Glu His
 245 250 255

<210> 173
 <211> 243
 <212> PRT
 <213> Homo sapien

<400> 173

236

Leu Arg Thr Gly Arg Asn Ser Gly Gly Gly Gln Asn Gly Leu Gln Gly
 1 5 10 15

Gln Pro Cys His Leu Ser Leu Pro His His His Ser Pro Pro Pro Ile
 20 25 30

Lys Leu Gln Ser Gly Cys Trp Thr Pro Leu Gly Ala Val Ser Ala His
 35 40 45

His Pro Leu Cys Ala Ala Thr Trp Ser Gln Ala His Cys Pro Leu Ala
 50 55 60

Gly Arg Gly Pro Ser Arg Arg Arg Cys Gly Leu His Arg Ala Pro Ser
 65 70 75 80

Thr Lys Glu Ser Ala Asn Ala Ser Ala Gly Pro Arg Ala Met Ala Ser
 85 90 95

Leu Pro Gln Leu Met Ala Ala Pro Thr Ser Ser Cys Thr Ser Leu Met
 100 105 110

Trp Lys Gly Ser Met Ser Gln Trp Lys Ala Thr Arg Ser Pro Ile Lys
 115 120 125

Cys Ala Pro Ser His Pro Arg Met Arg Ser Cys Arg Pro Trp Arg Ser
 130 135 140

Ser Ser Leu Thr Trp His Gln Ala Pro Ser Met Arg Pro Gly Leu Asp
 145 150 155 160

Met Ser Ser Ala Pro Arg Arg Trp Trp Lys His Pro Leu Ser Cys Ala
 165 170 175

Cys Gly Arg Leu Cys Gly Glu Glu Ala Ala Asp Thr Gly Asp Asp Ile
 180 185 190

Leu Pro His Glu Thr Gly Leu Gln Pro Gly Met Val Pro Leu Lys Tyr
 195 200 205

Leu Leu Glu Glu Gly Val Trp Gly Ala Gly Val Gly Cys Gly Val Phe
 210 215 220

Pro Ala Ile Ser Thr Ala Tyr Asp His Cys Asn Asn Leu Ser Pro Ser
 225 230 235 240

Glu Glu His

237

<210> 174
 <211> 147
 <212> PRT
 <213> Homo sapien

<400> 174

Met Ser Ser Glu Pro Pro Pro Pro Pro Gln Pro Pro Thr His Gln Ala
 1 5 10 15

Ser Val Gly Leu Leu Asp Thr Pro Arg Ser Arg Glu Arg Ser Pro Ser
 20 25 30

Pro Leu Arg Gly Asn Val Val Pro Ser Pro Leu Pro Thr Arg Arg Thr
 35 40 45

Arg Thr Phe Ser Ala Thr Val Arg Ala Ser Gln Gly Pro Val Tyr Lys
 50 55 60

Gly Val Cys Lys Cys Phe Cys Arg Ser Lys Gly His Gly Phe Ile Thr
 65 70 75 80

Pro Ala Asp Gly Gly Pro Asp Ile Phe Leu His Ile Ser Asp Val Glu
 85 90 95

Gly Glu Tyr Val Pro Val Glu Gly Asp Glu Val Thr Tyr Lys Met Cys
 100 105 110

Ser Ile Pro Pro Lys Asn Glu Lys Leu Gln Ala Val Glu Val Val Ile
 115 120 125

Thr His Leu Ala Pro Gly Thr Lys His Glu Thr Trp Ser Gly His Val
 130 135 140

Ile Ser Ser
 145

<210> 175
 <211> 202
 <212> PRT
 <213> Homo sapien

<400> 175

Trp Gly Thr Ala Val Gly Arg Gly Trp Asn Glu Leu Cys Val Pro Arg
 1 5 10 15

238

Ser Ala Asp Gly Ala Pro Asp Ile Ser Pro Ser Leu Ser Gly Arg Cys
 20 25 30

Gly Leu His Arg Ala Pro Ser Thr Lys Glu Ser Ala Asn Ala Ser Ala
 35 40 45

Gly Pro Arg Ala Met Ala Ser Leu Pro Gln Leu Met Ala Ala Pro Thr
 50 55 60

Ser Ser Cys Thr Ser Leu Met Trp Lys Gly Ser Met Ser Gln Trp Lys
 65 70 75 80

Ala Thr Arg Ser Pro Ile Lys Cys Ala Pro Ser His Pro Arg Met Arg
 85 90 95

Ser Cys Arg Pro Trp Arg Ser Ser Ser Leu Thr Trp His Gln Ala Pro
 100 105 110

Ser Met Arg Pro Gly Leu Asp Met Ser Ser Ala Pro Arg Arg Trp Trp
 115 120 125

Lys His Pro Leu Ser Cys Ala Cys Gly Arg Leu Cys Gly Glu Glu Ala
 130 135 140

Ala Asp Thr Gly Asp Asp Ile Leu Pro His Glu Thr Gly Leu Gln Pro
 145 150 155 160

Gly Met Val Pro Leu Lys Tyr Leu Leu Glu Glu Gly Val Trp Gly Ala
 165 170 175

Gly Val Gly Cys Gly Val Phe Pro Ala Ile Ser Thr Ala Tyr Asp His
 180 185 190

Cys Asn Asn Leu Ser Pro Ser Glu Glu His
 195 200

<210> 176

<211> 138

<212> PRT

<213> Homo sapien

<400> 176

Met Ala Ser Leu Pro Gln Leu Met Ala Ala Pro Thr Ser Ser Cys Thr
 1 5 10 15

Ser Leu Met Trp Lys Gly Ser Met Ser Gln Trp Lys Ala Thr Arg Ser
 20 25 30

239

Pro Ile Lys Cys Ala Pro Ser His Pro Arg Met Arg Ser Cys Arg Pro
 35 40 45

Trp Arg Ser Ser Ser Leu Thr Trp His Gln Ala Pro Ser Met Arg Pro
 50 55 60

Gly Leu Asp Met Ser Ser Ala Pro Arg Arg Trp Trp Lys His Pro Leu
 65 70 75 80

Ser Cys Ala Cys Gly Arg Leu Cys Gly Glu Glu Ala Ala Asp Thr Gly
 85 90 95

Asp Asp Ile Leu Pro His Glu Thr Gly Leu Gln Pro Gly Met Val Pro
 100 105 110

Leu Lys Tyr Leu Leu Glu Glu Gly Val Trp Gly Gly Arg Cys Gly Val
 115 120 125

Trp Gly Val Pro Gly His Gln His Ser Leu
 130 135

<210> 177
 <211> 185
 <212> PRT
 <213> Homo sapien

<400> 177

Met Ser Ser Glu Pro Pro Pro Pro Pro Gln Pro Pro Thr His Gln Ala
 1 5 10 15

Ser Val Gly Leu Leu Asp Thr Pro Arg Ser Arg Glu Arg Ser Pro Ser
 20 25 30

Pro Ser Thr Lys Glu Ser Ala Asn Ala Ser Ala Gly Pro Arg Ala Met
 35 40 45

Ala Ser Leu Pro Gln Leu Met Ala Ala Pro Thr Ser Ser Cys Thr Ser
 50 55 60

Leu Met Trp Lys Gly Ser Met Ser Gln Trp Lys Ala Thr Arg Ser Pro
 65 70 75 80

Ile Lys Cys Ala Pro Ser His Pro Arg Met Arg Ser Cys Arg Pro Trp
 85 90 95

240

Arg Ser Ser Ser Leu Thr Trp His Gln Ala Pro Ser Met Arg Pro Gly
 100 105 110

Leu Asp Met Ser Ser Ala Pro Arg Arg Trp Trp Lys His Pro Leu Ser
 115 120 125

Cys Ala Cys Gly Arg Leu Cys Gly Glu Glu Ala Ala Asp Thr Gly Asp
 130 135 140

Asp Ile Leu Pro His Glu Thr Gly Leu Gln Pro Gly Met Val Pro Leu
 145 150 155 160

Lys Tyr Leu Leu Glu Glu Gly Val Trp Gly Gly Arg Cys Gly Val Trp
 165 170 175

Gly Val Pro Gly His Gln His Ser Leu
 180 185

<210> 178

<211> 265

<212> PRT

<213> Homo sapien

<400> 178

Ser Phe Pro Pro Ala His Leu Phe Ser Ala Cys Arg Gly Ser Ser Ser
 1 5 10 15

Arg Pro Pro Arg Cys Phe Cys Leu Trp Ala Gly Ala Leu Asp Gly Gly
 20 25 30

Leu Ala Gly Arg Trp Gly Glu Ala Arg Gly Ala Ser His Ala Gly Ser
 35 40 45

Arg Ala Thr Pro Arg Arg Ala Trp Pro Arg Gln Leu Trp Leu Glu Val
 50 55 60

Gly Thr Ser Ala Met Ser Ser Glu Pro Pro Pro Pro Pro Gln Pro Pro
 65 70 75 80

Thr His Gln Ala Ser Val Gly Leu Leu Asp Thr Pro Arg Ser Arg Glu
 85 90 95

Arg Ser Pro Ser Pro Ser Thr Lys Glu Ser Ala Asn Ala Ser Ala Gly
 100 105 110

Pro Arg Ala Met Ala Ser Leu Pro Gln Leu Met Ala Ala Pro Thr Ser
 115 120 125

241

Ser Cys Thr Ser Leu Met Trp Lys Gly Ser Met Ser Gln Trp Lys Ala
 130 135 140

Thr Arg Ser Pro Ile Lys Cys Ala Pro Ser His Pro Arg Met Arg Ser
 145 150 155 160

Cys Arg Pro Trp Arg Ser Ser Ser Leu Thr Trp His Gln Ala Pro Ser
 165 170 175

Met Arg Pro Gly Leu Asp Met Ser Ser Ala Pro Arg Arg Trp Trp Lys
 180 185 190

His Pro Leu Ser Cys Ala Cys Gly Arg Leu Cys Gly Glu Glu Ala Ala
 195 200 205

Asp Thr Gly Asp Asp Ile Leu Pro His Glu Thr Gly Leu Gln Pro Gly
 210 215 220

Met Val Pro Leu Lys Tyr Leu Leu Glu Glu Gly Val Trp Gly Ala Gly
 225 230 235 240

Val Gly Cys Gly Val Phe Pro Ala Ile Ser Thr Ala Tyr Asp His Cys
 245 250 255

Asn Asn Leu Ser Pro Ser Glu Glu His
 260 265

<210> 179
 <211> 201
 <212> PRT
 <213> Homo sapien

<400> 179

Met Cys Ser Thr Val Pro Trp Arg Arg Thr Leu Arg Glu Gly Gln Phe
 1 5 10 15

Leu Pro Leu Leu Pro Cys Gly Val Trp Leu Pro Ala Ala Ser Gly Arg
 20 25 30

Val Arg Gly Val Ala Glu Phe Gly Ser Arg Trp Leu Ala Leu Lys Ser
 35 40 45

Pro Trp Leu Trp Val Phe Phe Phe Glu Thr Glu Ser Cys Ser Val Ala
 50 55 60

242

Gln Ala Gly Val Gln Trp Cys Asp Leu Ser Ser Leu Glu Pro Pro Pro
 65 70 75 80

Pro Arg Phe Lys Gln Phe Ser Cys Leu Ser Leu Gln Val Asp Gly Ile
 85 90 95

Thr Gly Ala Cys His His Ala Gln Leu Ile Phe Val Phe Val Leu Glu
 100 105 110

Thr Gly Phe Pro His Val Gly Gln Ala Ser Leu Glu Leu Leu Thr Leu
 115 120 125

Ser Asp Pro Pro Ala Ser Ala Ser Gln Ser Ala Gly Ile Ala Gly Val
 130 135 140

Ser His Cys Ala Arg Pro Leu Ala Leu Gly Phe Leu Leu Thr Phe Leu
 145 150 155 160

Leu Pro Ser His Lys Tyr Tyr Val Ser Gln Met Cys Arg Asp Pro Cys
 165 170 175

Leu Val Leu Gly Thr Gln Arg Gly Pro Met Pro Ser Trp Ser Trp Gly
 180 185 190

Arg Met Trp His Phe His Glu Glu Leu
 195 200

<210> 180
 <211> 159
 <212> PRT
 <213> Homo sapien

<400> 180

Met Ala Gln Gly Leu Ala Val Arg Glu Met Thr Gly Met Thr Lys Phe
 1 5 10 15

Lys Pro Tyr Phe Ile Ser Ala Thr Ser Glu Ile Leu Ser Gln Lys Cys
 20 25 30

Ile Asn Thr Asn Val Leu Phe Leu Ser Leu Ser Asp Asn His Gly His
 35 40 45

Ile Asp Pro Ser Leu Arg Leu Ile Trp Asp Leu Ala Phe Leu Gly Ser
 50 55 60

Ser Tyr Val Met Trp Glu Met Thr Thr Gln Val Ser His Tyr Tyr Leu
 65 70 75 80

243

Ala Gln Leu Thr Ser Val Arg Gln Trp Lys Thr Asn Asp Asp Thr Ile
85 90 95

Asp Phe Asp Tyr Thr Val Leu Leu His Glu Leu Ser Thr Gln Glu Ile
100 105 110

Ile Pro Cys Arg Ile His Leu Val Trp Tyr Pro Gly Lys Pro Leu Lys
115 120 125

Val Lys Tyr His Cys Gln Glu Leu Gln Thr Pro Glu Glu Ala Ser Gly
130 135 140

Thr Glu Glu Gly Ser Ala Val Val Pro Thr Glu Leu Ser Asn Phe
145 150 155

<210> 181
<211> 128
<212> PRT
<213> Homo sapien

<400> 181

Met Arg Ile His Asp Phe His Ile Leu Lys Gln Asn Thr Thr Lys Asn
1 5 10 15

Arg Glu Ala Glu Ile Glu Lys Ala Val Gly Asp Thr Arg His Pro Phe
20 25 30

Lys Thr Arg Met Tyr Cys Ile Val Ile Thr Leu Asn Thr Thr Ile Phe
35 40 45

Ile Thr Leu Thr Leu Phe Ser Pro Ser Arg Lys Thr Asn Asp Asp Thr
50 55 60

Ile Asp Phe Asp Tyr Thr Val Leu Leu His Glu Leu Ser Thr Gln Glu
65 70 75 80

Ile Ile Pro Cys Arg Ile His Leu Val Trp Tyr Pro Gly Lys Pro Leu
85 90 95

Lys Val Lys Tyr His Cys Gln Glu Leu Gln Thr Pro Glu Glu Ala Ser
100 105 110

Gly Thr Glu Glu Gly Ser Ala Val Val Pro Thr Glu Leu Ser Asn Phe
115 120 125

244

<210> 182
 <211> 224
 <212> PRT
 <213> Homo sapien

<400> 182

Met Asp Gly Asp Gln Thr Glu Glu Arg Met Met Lys Met Met Val His
 1 5 10 15

Gln Arg Pro Leu Pro Gln Pro Ala Leu Leu Pro Met Ser Ser Asn Thr
 20 25 30

Phe Pro Ser Arg Ser Thr Lys Pro Ser Pro Met Asn Pro Leu Pro Ser
 35 40 45

Ser His Met Pro Gly Ala Phe Ser Glu Ser Asn Ser Ser Phe Pro Gln
 50 55 60

Ser Ala Ser Leu Pro Pro Tyr Phe Ser Gln Gly Pro Ser Asn Arg Pro
 65 70 75 80

Pro Ile Arg Ala Glu Gly Arg Asn Phe Pro Leu Pro Leu Pro Asn Lys
 85 90 95

Pro Arg Pro Pro Ser Pro Ala Glu Glu Glu Asn Ser Leu Asn Glu Glu
 100 105 110

Trp Tyr Val Ser Tyr Ile Thr Arg Pro Glu Ala Glu Ala Ala Leu Arg
 115 120 125

Lys Ile Asn Gln Asp Gly Thr Phe Leu Val Arg Asp Ser Ser Lys Lys
 130 135 140

Thr Thr Thr Asn Pro Tyr Val Leu Met Val Leu Tyr Lys Asp Lys Val
 145 150 155 160

Tyr Asn Ile Gln Ile Arg Tyr Gln Lys Glu Ser Gln Val Tyr Leu Leu
 165 170 175

Gly Thr Gly Leu Arg Gly Lys Glu Asp Phe Leu Ser Val Ser Asp Ile
 180 185 190

Ile Asp Tyr Phe Arg Lys Met Pro Leu Leu Leu Ile Asp Gly Lys Asn
 195 200 205

Arg Gly Ser Arg Tyr Gln Cys Thr Leu Thr His Ala Ala Gly Tyr Pro
 210 215 220

245

<210> 183
 <211> 230
 <212> PRT
 <213> Homo sapien

<400> 183

Met Phe Leu Ser Asp Ser Trp Gly Leu Pro Ile Ser Phe Ile Val Phe
 1 5 10 15

Tyr Phe Cys Thr Val His Gln Arg Pro Leu Pro Gln Pro Ala Leu Leu
 20 25 30

Pro Met Ser Ser Asn Thr Phe Pro Ser Arg Ser Thr Lys Pro Ser Pro
 35 40 45

Met Asn Pro Leu Pro Ser Ser His Met Pro Gly Ala Phe Ser Glu Ser
 50 55 60

Asn Ser Ser Phe Pro Gln Ser Ala Ser Leu Pro Pro Tyr Phe Ser Gln
 65 70 75 80

Gly Pro Ser Asn Arg Pro Pro Ile Arg Ala Glu Gly Arg Asn Phe Pro
 85 90 95

Leu Pro Leu Pro Asn Lys Pro Arg Pro Pro Ser Pro Ala Glu Glu Glu
 100 105 110

Asn Ser Leu Asn Glu Glu Trp Tyr Val Ser Tyr Ile Thr Arg Pro Glu
 115 120 125

Ala Glu Ala Ala Leu Arg Lys Ile Asn Gln Asp Gly Thr Phe Leu Val
 130 135 140

Arg Asp Ser Ser Lys Lys Thr Thr Thr Asn Pro Tyr Val Leu Met Val
 145 150 155 160

Leu Tyr Lys Asp Lys Val Tyr Asn Ile Gln Ile Arg Tyr Gln Lys Glu
 165 170 175

Ser Gln Val Tyr Leu Leu Gly Thr Gly Leu Arg Gly Lys Glu Asp Phe
 180 185 190

Leu Ser Val Ser Asp Ile Ile Asp Tyr Phe Arg Lys Met Pro Leu Leu
 195 200 205

246

Leu Ile Asp Gly Lys Asn Arg Gly Ser Arg Tyr Gln Cys Thr Leu Thr
 210 215 220

His Ala Ala Gly Tyr Pro
 225 230

<210> 184
 <211> 225
 <212> PRT
 <213> Homo sapien

<400> 184

Gln Leu Gly Pro Ala Asn Leu Ile His Cys Phe Leu Leu Leu His Val
 1 5 10 15

His Gln Arg Pro Leu Pro Gln Pro Ala Leu Leu Pro Met Ser Ser Asn
 20 25 30

Thr Phe Pro Ser Arg Ser Thr Lys Pro Ser Pro Met Asn Pro Leu Pro
 35 40 45

Ser Ser His Met Pro Gly Ala Phe Ser Glu Ser Asn Ser Ser Phe Pro
 50 55 60

Gln Ser Ala Ser Leu Pro Pro Tyr Phe Ser Gln Gly Pro Ser Asn Arg
 65 70 75 80

Pro Pro Ile Arg Ala Glu Gly Arg Asn Phe Pro Leu Pro Leu Pro Asn
 85 90 95

Lys Pro Arg Pro Pro Ser Pro Ala Glu Glu Glu Asn Ser Leu Asn Glu
 100 105 110

Glu Trp Tyr Val Ser Tyr Ile Thr Arg Pro Glu Ala Glu Ala Ala Leu
 115 120 125

Arg Lys Ile Asn Gln Asp Gly Thr Phe Leu Val Arg Asp Ser Ser Lys
 130 135 140

Lys Thr Thr Thr Asn Pro Tyr Val Leu Met Val Leu Tyr Lys Asp Lys
 145 150 155 160

Val Tyr Asn Ile Gln Ile Arg Tyr Gln Lys Glu Ser Gln Val Tyr Leu
 165 170 175

Leu Gly Thr Gly Leu Arg Gly Lys Glu Asp Phe Leu Ser Val Ser Asp
 180 185 190

247

Ile Ile Asp Tyr Phe Arg Lys Met Pro Leu Leu Leu Ile Asp Gly Lys
 195 200 205

Asn Arg Gly Ser Arg Tyr Gln Cys Thr Leu Thr His Ala Ala Gly Tyr
 210 215 220

Pro
 225

<210> 185
 <211> 1085
 <212> PRT
 <213> Homo sapien

<400> 185

Met Ala Ala Ser Thr Gly Tyr Val Arg Leu Trp Gly Ala Ala Arg Cys
 1 5 10 15

Trp Val Leu Arg Arg Pro Met Leu Ala Ala Ala Gly Gly Arg Val Pro
 20 25 30

Thr Ala Ala Gly Ala Trp Leu Leu Arg Gly Gln Arg Thr Cys Asp Ala
 35 40 45

Ser Pro Pro Trp Ala Leu Trp Gly Arg Gly Pro Ala Ile Gly Gly Gln
 50 55 60

Trp Arg Gly Phe Trp Glu Ala Ser Ser Arg Gly Gly Gly Ala Phe Ser
 65 70 75 80

Gly Gly Glu Asp Ala Ser Glu Gly Gly Ala Glu Glu Gly Ala Gly Gly
 85 90 95

Ala Gly Gly Ser Ala Gly Ala Gly Glu Gly Pro Val Ile Thr Ala Leu
 100 105 110

Thr Pro Met Thr Ile Pro Asp Val Phe Pro His Leu Pro Leu Ile Ala
 115 120 125

Ile Thr Arg Asn Pro Val Phe Pro Arg Phe Ile Lys Ile Ile Glu Val
 130 135 140

Lys Asn Lys Lys Leu Val Glu Leu Leu Arg Arg Lys Val Arg Leu Ala
 145 150 155 160

248

Gln Pro Tyr Val Gly Val Phe Leu Lys Arg Asp Asp Ser Asn Glu Ser
 165 170 175

Asp Val Val Glu Ser Leu Asp Glu Ile Tyr His Thr Gly Thr Phe Ala
 180 185 190

Gln Ile His Glu Met Gln Asp Leu Gly Asp Lys Leu Arg Met Ile Val
 195 200 205

Met Gly His Arg Arg Val His Ile Ser Arg Gln Leu Glu Val Glu Pro
 210 215 220

Glu Glu Pro Glu Ala Glu Asn Lys His Lys Pro Arg Arg Lys Ser Lys
 225 230 235 240

Arg Gly Lys Lys Glu Ala Glu Asp Glu Leu Ser Ala Arg His Pro Ala
 245 250 255

Glu Leu Ala Met Glu Pro Thr Pro Glu Leu Pro Ala Glu Val Leu Met
 260 265 270

Val Glu Val Glu Asn Val Val His Glu Asp Phe Gln Val Thr Glu Glu
 275 280 285

Val Lys Ala Leu Thr Ala Glu Ile Val Lys Thr Ile Arg Asp Ile Ile
 290 295 300

Ala Leu Asn Pro Leu Tyr Arg Glu Ser Val Leu Gln Met Met Gln Ala
 305 310 315 320

Gly Gln Arg Val Val Asp Asn Pro Ile Tyr Leu Ser Asp Met Gly Ala
 325 330 335

Ala Leu Thr Gly Ala Glu Ser His Glu Leu Gln Asp Val Leu Glu Glu
 340 345 350

Thr Asn Ile Pro Lys Arg Leu Tyr Lys Ala Leu Ser Leu Leu Lys Lys
 355 360 365

Glu Phe Glu Leu Ser Lys Leu Gln Gln Arg Leu Gly Arg Glu Val Glu
 370 375 380

Glu Lys Ile Lys Gln Thr His Arg Lys Tyr Leu Leu Gln Glu Gln Leu
 385 390 395 400

Lys Ile Ile Lys Lys Glu Leu Gly Leu Glu Lys Asp Asp Lys Asp Ala

249

405

410

415

Ile Glu Glu Lys Phe Arg Glu Arg Leu Lys Glu Leu Val Val Pro Lys
 420 425 430

His Val Met Asp Val Val Asp Glu Glu Leu Ser Lys Leu Gly Leu Leu
 435 440 445

Asp Asn His Ser Ser Glu Phe Asn Val Thr Arg Asn Tyr Leu Asp Trp
 450 455 460

Leu Thr Ser Ile Pro Trp Gly Lys Tyr Ser Asn Glu Asn Leu Asp Leu
 465 470 475 480

Ala Arg Ala Gln Ala Val Leu Glu Glu Asp His Tyr Gly Met Glu Asp
 485 490 495

Val Lys Lys Arg Ile Leu Glu Phe Ile Ala Val Ser Gln Leu Arg Gly
 500 505 510

Ser Thr Gln Gly Lys Ile Leu Cys Phe Tyr Gly Pro Pro Gly Val Gly
 515 520 525

Lys Thr Ser Ile Ala Arg Ser Ile Ala Arg Ala Leu Asn Arg Glu Tyr
 530 535 540

Phe Arg Phe Ser Val Gly Gly Met Thr Asp Val Ala Glu Ile Lys Gly
 545 550 555 560

His Arg Arg Thr Tyr Val Gly Ala Met Pro Gly Lys Ile Ile Gln Cys
 565 570 575

Leu Lys Lys Thr Lys Thr Glu Asn Pro Leu Ile Leu Ile Asp Glu Val
 580 585 590

Arg Ala Glu Arg Pro Gly Asp Pro Leu Thr Arg Gln Cys Arg Val Gln
 595 600 605

Asp Glu Ala Glu Ala Phe Arg Val Leu Gly Ser Pro Ser Gln Leu Arg
 610 615 620

Gly His Arg Arg Asp Ala Gly Pro Asp Gly Thr Asp Gly Ser Leu Pro
 625 630 635 640

Thr His Ser His Ala Gln Gln Ala Ala Arg Pro Arg Gln Gly Val Gly
 645 650 655

250

Ala Ala Leu Thr Arg Gly Leu Pro Ser Pro Asp Pro Gly Val Ser Pro
 660 665 670

Leu Gly Gly Leu Ala Arg Gly Thr Ala Arg Gly Thr Thr Cys Cys Leu
 675 680 685

Leu Pro Gln Val Asp Lys Ile Gly Arg Gly Tyr Gln Gly Asp Pro Ser
 690 695 700

Ser Ala Leu Leu Glu Leu Leu Asp Pro Glu Gln Asn Ala Asn Phe Leu
 705 710 715 720

Asp His Tyr Leu Asp Val Pro Val Asp Leu Ser Lys Val Gly Gly Leu
 725 730 735

Ser Gly Ala Trp Ala Cys Trp Gly Gly Tyr Ala Ala Ser Pro Pro Ala
 740 745 750

Pro Cys Arg Arg Pro Gln Val Leu Phe Ile Cys Thr Ala Asn Val Thr
 755 760 765

Asp Thr Ile Pro Glu Pro Leu Arg Asp Arg Met Glu Met Ile Asn Val
 770 775 780

Ser Gly Tyr Val Ala Gln Glu Lys Leu Ala Ile Ala Glu Arg Tyr Leu
 785 790 795 800

Val Pro Gln Ala Arg Ala Leu Cys Gly Leu Asp Glu Ser Lys Ala Lys
 805 810 815

Leu Ser Ser Asp Val Leu Thr Leu Leu Ile Lys Gln Tyr Cys Arg Glu
 820 825 830

Ser Gly Val Arg Asn Leu Gln Lys Gln Val Glu Lys Val Leu Arg Lys
 835 840 845

Ser Ala Tyr Lys Ile Val Ser Gly Glu Ala Glu Ser Val Glu Val Thr
 850 855 860

Pro Glu Asn Leu Gln Asp Phe Val Gly Lys Pro Val Phe Thr Val Glu
 865 870 875 880

Arg Met Tyr Asp Val Thr Pro Pro Gly Val Val Met Gly Leu Ala Trp
 885 890 895

251

Thr Ala Met Gly Gly Ser Thr Leu Phe Val Glu Thr Ser Leu Arg Arg
 900 905 910

Pro Gln Asp Lys Asp Ala Lys Gly Asp Lys Asp Gly Ser Leu Glu Val
 915 920 925

Thr Gly Gln Leu Gly Glu Val Met Lys Glu Ser Ala Arg Ile Ala Tyr
 930 935 940

Thr Phe Ala Arg Ala Phe Leu Met Gln His Ala Pro Ala Asn Asp Tyr
 945 950 955 960

Leu Val Thr Ser His Ile His Leu His Val Pro Glu Gly Ala Thr Pro
 965 970 975

Lys Asp Gly Pro Ser Ala Gly Cys Thr Ile Val Thr Ala Leu Leu Ser
 980 985 990

Leu Ala Met Gly Arg Pro Val Arg Gln Asn Leu Ala Met Thr Gly Glu
 995 1000 1005

Val Ser Leu Thr Gly Lys Ile Leu Pro Val Gly Gly Ile Lys Glu
 1010 1015 1020

Lys Thr Ile Ala Ala Lys Arg Ala Gly Val Thr Cys Ile Val Leu
 1025 1030 1035

Pro Ala Glu Asn Lys Lys Asp Phe Tyr Asp Leu Ala Ala Phe Ile
 1040 1045 1050

Thr Glu Gly Leu Glu Val His Phe Val Glu His Tyr Arg Glu Ile
 1055 1060 1065

Phe Asp Ile Ala Phe Pro Asp Glu Gln Ala Glu Ala Leu Ala Val
 1070 1075 1080

Glu Arg
 1085

<210> 186
 <211> 668
 <212> PRT
 <213> Homo sapien

<400> 186

Asn Ser Ala Pro Ser Ser Pro Arg Arg Pro Ser Ser Leu Lys Arg Leu

252

1	5	10	15
Phe Arg Ala Thr Arg Pro Ser Gly Thr Glu Ala Arg Ala Gly Arg His	20	25	30
Val Arg Phe Ala Ala Ser Gly Asn Asp Ala Ser Cys Val Ser Arg Gln	35	40	45
Tyr Gly Arg Ala Met Ala Ala Ser Thr Gly Tyr Val Arg Leu Trp Gly	50	55	60
Ala Ala Arg Cys Trp Val Leu Arg Arg Pro Met Leu Ala Ala Ala Gly	65	70	75
Gly Arg Val Pro Thr Ala Ala Gly Ala Trp Leu Leu Arg Gly Gln Arg	85	90	95
Thr Cys Asp Ala Ser Pro Pro Trp Ala Leu Trp Gly Arg Gly Pro Ala	100	105	110
Ile Gly Gly Gln Trp Arg Gly Phe Trp Glu Ala Ser Ser Arg Gly Gly	115	120	125
Gly Ala Phe Ser Gly Gly Glu Asp Ala Ser Glu Gly Gly Ala Glu Glu	130	135	140
Gly Ala Gly Gly Ala Gly Gly Ser Ala Gly Ala Gly Glu Gly Pro Val	145	150	155
Ile Thr Ala Leu Thr Pro Met Thr Ile Pro Asp Val Phe Pro His Leu	165	170	175
Pro Leu Ile Ala Ile Thr Arg Asn Pro Val Phe Pro Arg Phe Ile Lys	180	185	190
Ile Ile Glu Val Lys Asn Lys Lys Leu Val Glu Leu Leu Arg Arg Lys	195	200	205
Val Arg Leu Ala Gln Pro Tyr Val Gly Val Phe Leu Lys Arg Asp Asp	210	215	220
Ser Asn Glu Ser Asp Val Val Glu Ser Leu Asp Glu Ile Tyr His Thr	225	230	235
Gly Thr Phe Ala Gln Ile His Glu Met Gln Asp Leu Gly Asp Lys Leu	245	250	255

253

Arg Met Ile Val Met Gly His Arg Arg Val His Ile Ser Arg Gln Leu
 260 265 270

Glu Val Glu Pro Glu Glu Pro Glu Ala Glu Asn Lys His Lys Pro Arg
 275 280 285

Arg Lys Ser Lys Arg Gly Lys Lys Glu Ala Glu Asp Glu Leu Ser Ala
 290 295 300

Arg His Pro Ala Glu Leu Ala Met Glu Pro Thr Pro Glu Leu Pro Ala
 305 310 315 320

Glu Val Leu Met Val Glu Val Glu Asn Val Val His Glu Asp Phe Gln
 325 330 335

Val Thr Glu Glu Val Lys Ala Leu Thr Ala Glu Ile Val Lys Thr Ile
 340 345 350

Arg Asp Ile Ile Ala Leu Asn Pro Leu Tyr Arg Glu Ser Val Leu Gln
 355 360 365

Met Met Gln Ala Gly Gln Arg Val Val Asp Asn Pro Ile Tyr Leu Ser
 370 375 380

Asp Met Gly Ala Ala Leu Thr Gly Ala Glu Ser His Glu Leu Gln Asp
 385 390 395 400

Val Leu Glu Glu Thr Asn Ile Pro Lys Arg Leu Tyr Lys Ala Leu Ser
 405 410 415

Leu Leu Lys Lys Glu Phe Glu Leu Ser Lys Leu Gln Gln Arg Leu Gly
 420 425 430

Arg Glu Val Glu Glu Lys Ile Lys Gln Thr His Arg Lys Tyr Leu Leu
 435 440 445

Gln Glu Gln Leu Lys Ile Ile Lys Lys Glu Leu Gly Leu Glu Lys Asp
 450 455 460

Asp Lys Asp Ala Ile Glu Glu Lys Phe Arg Glu Arg Leu Lys Glu Leu
 465 470 475 480

Val Val Pro Lys His Val Met Asp Val Val Asp Glu Glu Leu Ser Lys
 485 490 495

254

Leu Gly Leu Leu Asp Asn His Ser Ser Glu Phe Asn Val Thr Arg Asn
 500 505 510

Tyr Leu Asp Trp Leu Thr Ser Ile Pro Trp Gly Lys Tyr Ser Asn Glu
 515 520 525

Asn Leu Asp Leu Ala Arg Ala Gln Ala Val Leu Glu Glu Asp His Tyr
 530 535 540

Gly Met Glu Asp Val Lys Lys Arg Ile Leu Glu Phe Ile Ala Val Ser
 545 550 555 560

Gln Leu Arg Gly Ser Thr Gln Gly Lys Ile Leu Cys Phe Tyr Gly Pro
 565 570 575

Pro Gly Val Gly Lys Thr Ser Ile Ala Arg Ser Ile Ala Arg Ala Leu
 580 585 590

Asn Arg Glu Tyr Phe Arg Phe Ser Val Gly Gly Met Thr Asp Val Ala
 595 600 605

Glu Ile Lys Gly His Arg Arg Thr Tyr Val Gly Ala Met Pro Gly Lys
 610 615 620

Ile Ile Gln Cys Leu Lys Lys Thr Lys Thr Glu Asn Pro Leu Ile Leu
 625 630 635 640

Ile Asp Glu Val Arg Ala Glu Arg Pro Gly Asp Pro Leu Thr Arg Gln
 645 650 655

Cys Arg Val Gln Asp Glu Ala Glu Pro Ser Gly Ser
 660 665

<210> 187

<211> 771

<212> PRT

<213> Homo sapien

<400> 187

Met Glu Glu Arg Lys His Ser Leu Phe Phe Ser Pro Glu Ile Ala Tyr
 1 5 10 15

Pro Lys Asp Lys Ala Leu Arg Gly Lys Glu Thr Gly Phe Gly Phe Ser
 20 25 30

Phe Asp Ser Leu Gly Pro Val Ser Leu Gly Leu Val Ser Pro Pro Gly

255

35

40

45

Thr Ala Leu Leu His Leu Pro Gly Arg Pro Trp Pro Gly Pro Val Gly
 50 55 60

Gly Gly Glu Gly Val Asp Gly Ala Gly Gly Trp Gly Ser Gln Gly His
 65 70 75 80

Ala Pro Thr Gln Pro Thr Pro Cys Trp Ser Thr Ala Gly Pro Gln Arg
 85 90 95

Pro Cys Pro Ile Leu Gly Ala Leu Thr Ala Glu Ile Val Lys Thr Ile
 100 105 110

Arg Asp Ile Ile Ala Leu Asn Pro Leu Tyr Arg Glu Ser Val Leu Gln
 115 120 125

Met Met Gln Ala Gly Gln Arg Val Val Asp Asn Pro Ile Tyr Leu Ser
 130 135 140

Asp Met Gly Ala Ala Leu Thr Gly Ala Glu Ser His Glu Leu Gln Asp
 145 150 155 160

Val Leu Glu Glu Thr Asn Ile Pro Lys Arg Leu Tyr Lys Ala Leu Ser
 165 170 175

Leu Leu Lys Lys Glu Phe Glu Leu Ser Lys Leu Gln Gln Arg Leu Gly
 180 185 190

Arg Glu Val Glu Glu Lys Ile Lys Gln Thr His Arg Lys Tyr Leu Leu
 195 200 205

Gln Glu Gln Leu Lys Ile Ile Lys Lys Glu Leu Gly Leu Glu Lys Asp
 210 215 220

Asp Lys Asp Ala Ile Glu Glu Lys Phe Arg Glu Arg Leu Lys Glu Leu
 225 230 235 240

Val Val Pro Lys His Val Met Asp Val Val Asp Glu Glu Leu Ser Lys
 245 250 255

Leu Gly Leu Leu Asp Asn His Ser Ser Glu Phe Asn Val Thr Arg Asn
 260 265 270

Tyr Leu Asp Trp Leu Thr Ser Ile Pro Trp Gly Lys Tyr Ser Asn Glu
 275 280 285

256

Asn Leu Asp Leu Ala Arg Ala Gln Ala Val Leu Glu Glu Asp His Tyr
290 295 300

Gly Met Glu Asp Val Lys Lys Arg Ile Leu Glu Phe Ile Ala Val Ser
305 310 315 320

Gln Leu Arg Gly Ser Thr Gln Gly Lys Ile Leu Cys Phe Tyr Gly Pro
325 330 335

Pro Gly Val Gly Lys Thr Ser Ile Ala Arg Ser Ile Ala Arg Ala Leu
340 345 350

Asn Arg Glu Tyr Phe Arg Phe Ser Val Gly Gly Met Thr Asp Val Ala
355 360 365

Glu Ile Lys Gly His Arg Arg Thr Tyr Val Gly Ala Met Pro Gly Lys
370 375 380

Ile Ile Gln Cys Leu Lys Lys Thr Lys Thr Glu Asn Pro Leu Ile Leu
385 390 395 400

Ile Asp Glu Val Asp Lys Ile Gly Arg Gly Tyr Gln Gly Asp Pro Ser
405 410 415

Ser Ala Leu Leu Glu Leu Leu Asp Pro Glu Gln Asn Ala Asn Phe Leu
420 425 430

Asp His Tyr Leu Asp Val Pro Val Asp Leu Ser Lys Val Leu Phe Ile
435 440 445

Cys Thr Ala Asn Val Thr Asp Thr Ile Pro Glu Pro Leu Arg Asp Arg
450 455 460

Met Glu Met Ile Asn Val Ser Gly Tyr Val Ala Gln Glu Lys Leu Ala
465 470 475 480

Ile Ala Glu Arg Tyr Leu Val Pro Gln Ala Arg Ala Leu Cys Gly Leu
485 490 495

Asp Glu Ser Lys Ala Lys Leu Ser Ser Asp Val Leu Thr Leu Leu Ile
500 505 510

Lys Gln Tyr Cys Arg Glu Ser Gly Val Arg Asn Leu Gln Lys Gln Val
515 520 525

257

Glu Lys Val Leu Arg Lys Ser Ala Tyr Lys Ile Val Ser Gly Glu Ala
 530 535 540

Glu Ser Val Glu Val Thr Pro Glu Asn Leu Gln Asp Phe Val Gly Lys
 545 550 555 560

Pro Val Phe Thr Val Glu Arg Met Tyr Asp Val Thr Pro Pro Gly Val
 565 570 575

Val Met Gly Leu Ala Trp Thr Ala Met Gly Gly Ser Thr Leu Phe Val
 580 585 590

Glu Thr Ser Leu Arg Arg Pro Gln Asp Lys Asp Ala Lys Gly Asp Lys
 595 600 605

Asp Gly Ser Leu Glu Val Thr Gly Gln Leu Gly Glu Val Met Lys Glu
 610 615 620

Ser Ala Arg Ile Ala Tyr Thr Phe Ala Arg Ala Phe Leu Met Gln His
 625 630 635 640

Ala Pro Ala Asn Asp Tyr Leu Val Thr Ser His Ile His Leu His Val
 645 650 655

Pro Glu Gly Ala Thr Pro Lys Asp Gly Pro Ser Ala Gly Cys Thr Ile
 660 665 670

Val Thr Ala Leu Leu Ser Leu Ala Met Gly Arg Pro Val Arg Gln Asn
 675 680 685

Leu Ala Met Thr Gly Glu Val Ser Leu Thr Gly Lys Ile Leu Pro Val
 690 695 700

Gly Gly Ile Lys Glu Lys Thr Ile Ala Ala Lys Arg Ala Gly Val Thr
 705 710 715 720

Cys Ile Val Leu Pro Ala Glu Asn Lys Lys Asp Phe Tyr Asp Leu Ala
 725 730 735

Ala Phe Ile Thr Glu Gly Leu Glu Val His Phe Val Glu His Tyr Arg
 740 745 750

Glu Ile Phe Asp Ile Ala Phe Pro Asp Glu Gln Ala Glu Ala Leu Ala
 755 760 765

258

Val Glu Arg
770

<210> 188
<211> 848
<212> PRT
<213> Homo sapien

<400> 188

Met Ala Ala Ser Thr Gly Tyr Val Arg Leu Trp Gly Ala Ala Arg Cys
1 5 10 15

Trp Val Leu Arg Arg Pro Met Leu Ala Ala Gly Gly Arg Val Pro
20 25 30

Thr Ala Ala Gly Ala Trp Leu Leu Arg Gly Gln Arg Thr Cys Asp Ala
35 40 45

Ser Pro Pro Trp Ala Leu Trp Gly Arg Gly Pro Ala Ile Gly Gly Gln
50 55 60

Trp Arg Gly Phe Trp Glu Ala Ser Ser Arg Gly Gly Gly Ala Phe Ser
65 70 75 80

Gly Gly Glu Asp Ala Ser Glu Gly Gly Ala Glu Glu Gly Ala Gly Gly
85 90 95

Ala Gly Gly Ser Ala Gly Ala Gly Glu Gly Pro Val Ile Thr Ala Leu
100 105 110

Thr Pro Met Thr Ile Pro Asp Val Phe Pro His Leu Pro Leu Ile Ala
115 120 125

Ile Thr Arg Asn Pro Val Phe Pro Arg Phe Ile Lys Ile Ile Glu Val
130 135 140

Lys Asn Lys Lys Leu Val Glu Leu Leu Arg Arg Lys Val Arg Leu Ala
145 150 155 160

Gln Pro Tyr Val Gly Val Phe Leu Lys Arg Asp Asp Ser Asn Glu Ser
165 170 175

Asp Val Val Glu Ser Leu Asp Glu Ile Tyr His Thr Gly Thr Phe Ala
180 185 190

Gln Ile His Glu Met Gln Asp Leu Gly Asp Lys Leu Arg Met Ile Val
195 200 205

259

Met Gly His Arg Arg Val His Ile Ser Arg Gln Leu Glu Val Glu Pro
 210 215 220

Glu Glu Pro Glu Ala Glu Asn Lys His Lys Pro Arg Arg Lys Ser Lys
 225 230 235 240

Arg Gly Lys Lys Glu Ala Glu Asp Glu Leu Ser Ala Arg His Pro Ala
 245 250 255

Glu Leu Ala Met Glu Pro Thr Pro Glu Leu Pro Ala Glu Val Leu Met
 260 265 270

Val Glu Val Glu Asn Val Val His Glu Asp Phe Gln Val Thr Glu Glu
 275 280 285

Val Lys Ala Leu Thr Ala Glu Ile Val Lys Thr Ile Arg Asp Ile Ile
 290 295 300

Ala Leu Asn Pro Leu Tyr Arg Glu Ser Val Leu Gln Met Met Gln Ala
 305 310 315 320

Gly Gln Arg Val Val Asp Asn Pro Ile Tyr Leu Ser Asp Met Gly Ala
 325 330 335

Ala Leu Thr Gly Ala Glu Ser His Glu Leu Gln Asp Val Leu Glu Glu
 340 345 350

Thr Asn Ile Pro Lys Arg Leu Tyr Lys Ala Leu Ser Leu Leu Lys Lys
 355 360 365

Glu Phe Glu Leu Ser Lys Leu Gln Gln Arg Leu Gly Arg Glu Val Glu
 370 375 380

Glu Lys Ile Lys Gln Thr His Arg Lys Tyr Leu Leu Gln Glu Gln Leu
 385 390 395 400

Lys Ile Ile Lys Lys Glu Leu Gly Leu Glu Lys Asp Asp Lys Asp Ala
 405 410 415

Ile Glu Glu Lys Phe Arg Glu Arg Leu Lys Glu Leu Val Val Pro Lys
 420 425 430

His Val Met Asp Val Val Asp Glu Glu Leu Ser Lys Leu Gly Leu Leu
 435 440 445

260

Asp Asn His Ser Ser Glu Phe Asn Val Thr Arg Asn Tyr Leu Asp Trp
 450 455 460

Leu Thr Ser Ile Pro Trp Gly Lys Tyr Ser Asn Glu Asn Leu Asp Leu
 465 470 475 480

Ala Arg Ala Gln Ala Val Leu Glu Glu Asp His Tyr Gly Met Glu Asp
 485 490 495

Val Lys Lys Arg Ile Leu Glu Phe Ile Ala Val Ser Gln Leu Arg Gly
 500 505 510

Ser Thr Gln Gly Lys Ile Leu Cys Phe Tyr Gly Pro Pro Gly Val Gly
 515 520 525

Lys Thr Ser Ile Ala Arg Ser Ile Ala Arg Ala Leu Asn Arg Glu Tyr
 530 535 540

Phe Arg Phe Ser Val Gly Gly Met Thr Asp Val Ala Glu Ile Lys Gly
 545 550 555 560

His Arg Arg Thr Tyr Val Gly Ala Met Pro Gly Lys Ile Ile Gln Cys
 565 570 575

Leu Lys Lys Thr Lys Thr Glu Asn Pro Leu Ile Leu Ile Asp Glu Val
 580 585 590

Asp Lys Ile Gly Arg Gly Tyr Gln Gly Asp Pro Ser Ser Ala Leu Leu
 595 600 605

Glu Leu Leu Asp Pro Glu Gln Asn Ala Asn Phe Leu Asp His Tyr Leu
 610 615 620

Asp Val Pro Val Asp Leu Ser Lys Val Leu Phe Ile Cys Thr Ala Asn
 625 630 635 640

Val Thr Asp Thr Ile Pro Glu Pro Leu Arg Asp Arg Met Glu Met Ile
 645 650 655

Asn Val Ser Gly Tyr Val Ala Gln Glu Lys Leu Ala Ile Ala Glu Arg
 660 665 670

Tyr Leu Val Pro Gln Ala Arg Ala Leu Cys Gly Leu Asp Glu Ser Lys
 675 680 685

261

Ala Lys Leu Ser Ser Asp Val Leu Thr Leu Leu Ile Lys Gln Tyr Cys
 690 695 700

Arg Glu Ser Gly Val Arg Asn Leu Gln Lys Gln Val Glu Lys Val Leu
 705 710 715 720

Arg Lys Ser Ala Tyr Lys Ile Val Ser Gly Glu Ala Glu Ser Val Glu
 725 730 735

Val Thr Pro Glu Asn Leu Gln Asp Phe Val Gly Lys Pro Val Phe Thr
 740 745 750

Val Glu Arg Met Tyr Asp Val Thr Pro Pro Gly Val Val Met Gly Leu
 755 760 765

Ala Trp Thr Ala Met Gly Glu Arg Gly Gly Gly Arg Arg Pro Gln Ser
 770 775 780

His Ser His Phe Tyr Pro Arg Thr Ser Arg Ser His Leu Val His Leu
 785 790 795 800

Cys Ser Gly Pro Gln Val Ala Leu Asn Gly Leu Trp Arg Gly Val Val
 805 810 815

Cys Trp Glu Pro Arg Gly Ser Gly Leu Arg Glu Gly Lys Ala Val Thr
 820 825 830

His Gly Gly Gly Ser Thr Pro Trp Ala Leu Trp Ile Trp Val Pro Leu
 835 840 845

<210> 189
 <211> 124
 <212> PRT
 <213> Homo sapien

<400> 189

Met Val Phe Leu His Val Gly Gln Ala Gly Leu Glu Leu Pro Thr Ser
 1 5 10 15

Gly Asp Pro Pro Thr Ser Ala Ser Gln Ser Ala Gly Met Thr Glu Leu
 20 25 30

Glu Leu Gly Pro Ser Pro Arg Leu Gln Pro Ile Arg Arg His Pro Lys
 35 40 45

Glu Leu Pro Gln Tyr Gly Gly Pro Gly Lys Asp Ile Phe Glu Asp Gln
 50 55 60

262

Leu Tyr Leu Pro Val His Ser Asp Gly Ile Ser Val His Gln Met Phe
65 70 75 80

Thr Met Ala Thr Ala Glu His Arg Ser Asn Ser Ser Ile Ala Gly Lys
85 90 95

Met Leu Thr Lys Val Glu Lys Asn His Glu Lys Glu Lys Ser Gln His
100 105 110

Leu Glu Gly Ser Ala Ser Ser Ser Leu Ser Ser Asp
115 120

<210> 190

<211> 296

<212> PRT

<213> Homo sapien

<400> 190

Met Ser Thr Glu Arg Thr Ser Trp Thr Ser Leu Ser Thr Ile Gln Lys
1 5 10 15

Ile Ala Leu Gly Leu Gly Ile Pro Ala Ser Ala Thr Val Ala Tyr Ile
20 25 30

Leu Tyr Arg Arg Tyr Arg Glu Ser Arg Glu Glu Arg Leu Thr Phe Val
35 40 45

Gly Glu Asp Asp Ile Glu Ile Glu Met Arg Val Pro Gln Glu Ala Val
50 55 60

Lys Leu Ile Ile Gly Arg Gln Gly Ala Asn Ile Lys Gln Leu Arg Lys
65 70 75 80

Gln Thr Gly Ala Arg Ile Asp Val Asp Thr Glu Asp Val Gly Asp Glu
85 90 95

Arg Val Leu Leu Ile Ser Gly Phe Pro Val Gln Val Cys Lys Ala Lys
100 105 110

Ala Ala Ile His Gln Ile Leu Thr Glu Asn Thr Pro Val Ser Glu Gln
115 120 125

Leu Ser Val Pro Gln Arg Ser Val Gly Arg Ile Ile Gly Arg Gly Gly
130 135 140

263

Glu Thr Ile Arg Ser Ile Cys Lys Ala Ser Gly Ala Lys Ile Thr Cys
 145 150 155 160

Asp Lys Glu Ser Glu Gly Thr Leu Leu Leu Ser Arg Leu Ile Lys Ile
 165 170 175

Ser Gly Thr Gln Lys Glu Val Ala Ala Ala Lys His Leu Ile Leu Glu
 180 185 190

Lys Val Ser Glu Asp Glu Glu Leu Arg Lys Arg Ile Ala His Ser Ala
 195 200 205

Glu Thr Arg Val Pro Arg Lys Gln Pro Ile Ser Val Arg Arg Glu Asp
 210 215 220

Met Thr Glu Pro Gly Gly Ala Gly Glu Pro Ala Leu Trp Lys Asn Thr
 225 230 235 240

Ser Ser Ser Met Glu Pro Thr Ala Pro Leu Val Thr Pro Pro Pro Lys
 245 250 255

Gly Gly Gly Asp Met Ala Val Val Val Ser Lys Glu Gly Ser Trp Glu
 260 265 270

Lys Pro Ser Asp Asp Ser Phe Gln Lys Ser Glu Ala Gln Ala Ile Pro
 275 280 285

Glu Met Pro Met Phe Glu Ser Met
 290 295

<210> 191

<211> 195

<212> PRT

<213> Homo sapien

<400> 191

Ala Arg Tyr Glu Ala Trp Gly Glu Ser Ala Glu Ala His Val Leu Glu
 1 5 10 15

Gly Pro Asp Thr Asn Thr Thr Ile Ile Gln Leu Gln Pro Leu Gln Glu
 20 25 30

Pro Glu Ser Trp Ala Arg Thr Gln Ser Gly Leu Gln Ser Tyr Leu Leu
 35 40 45

Gln Phe His Gly Leu Val Arg Leu Val His Gln Glu Arg Thr Leu Ala
 50 55 60

264

Phe Pro Leu Thr Ile Arg Cys Phe Leu Gly Cys Glu Leu Pro Pro Glu
65 70 75 80

Gly Ser Arg Ala His Val Phe Phe Glu Val Ala Val Asn Gly Ser Ser
85 90 95

Phe Val Ser Phe Arg Pro Glu Arg Ala Leu Trp Gln Ala Asp Thr Gln
100 105 110

Val Thr Ser Gly Val Val Thr Phe Thr Leu Gln Gln Leu Asn Ala Tyr
115 120 125

Asn Arg Thr Arg Tyr Glu Leu Arg Glu Phe Leu Glu Asp Thr Cys Val
130 135 140

Gln Tyr Val Gln Lys His Ile Ser Ala Glu Asn Thr Lys Gly Ser Gln
145 150 155 160

Thr Ser Arg Ser Tyr Thr Ser Leu Val Leu Gly Val Leu Val Gly Ser
165 170 175

Phe Ile Ile Ala Gly Val Ala Val Gly Ile Phe Leu Cys Thr Gly Gly
180 185 190

Arg Arg Cys
195

<210> 192
<211> 194
<212> PRT
<213> Homo sapien

<220>
<221> MISC_FEATURE
<222> (6)..(7)
<223> X=any amino acid

<400> 192

Leu Gly Thr Gly Arg Xaa Xaa Ser Ala Glu Ala His Val Leu Glu Gly
1 5 10 15

Pro Asp Thr Asn Thr Thr Ile Ile Gln Leu Gln Pro Leu Gln Glu Pro
20 25 30

Glu Ser Trp Ala Arg Thr Gln Ser Gly Leu Gln Ser Tyr Leu Leu Gln
35 40 45

265

Phe His Gly Leu Val Arg Leu Val His Gln Glu Arg Thr Leu Ala Phe
 50 55 60

Pro Leu Thr Ile Arg Cys Phe Leu Gly Cys Glu Leu Pro Pro Glu Gly
 65 70 75 80

Ser Arg Ala His Val Phe Phe Glu Val Ala Val Asn Gly Ser Ser Phe
 85 90 95

Val Ser Phe Arg Pro Glu Arg Ala Leu Trp Gln Ala Asp Thr Gln Val
 100 105 110

Thr Ser Gly Val Val Thr Phe Thr Leu Gln Gln Leu Asn Ala Tyr Asn
 115 120 125

Arg Thr Arg Tyr Glu Leu Arg Glu Phe Leu Glu Asp Thr Cys Val Gln
 130 135 140

Tyr Val Gln Lys His Ile Ser Ala Glu Asn Thr Lys Gly Ser Gln Thr
 145 150 155 160

Ser Arg Ser Tyr Thr Ser Leu Val Leu Gly Val Leu Val Gly Ser Phe
 165 170 175

Ile Ile Ala Gly Val Ala Val Gly Ile Phe Leu Cys Thr Gly Gly Arg
 180 185 190

Arg Cys

<210> 193
 <211> 132
 <212> PRT
 <213> Homo sapien

<400> 193

Met Asn Tyr Thr Gln Arg Glu Leu Gln Met Ala Ala Pro Thr His Leu
 1 5 10 15

Asn His Thr Val Val Gly Thr Pro Cys Gly Asn Gln Thr Leu Ala Thr
 20 25 30

Thr Arg Arg Lys His Leu Ala Trp Arg Glu Arg Arg Pro Ala His Thr
 35 40 45

266

Thr Pro Ala Arg Ala Arg Asp Gly Asn Pro Asn Ile Gly Val Gly Ala
 50 55 60

Ala Asp Lys Pro Pro Ser Leu Leu Asn His Ala Arg Arg Ser Ser Leu
 65 70 75 80

Pro Asn Arg Pro Pro Arg Ser Thr Gly Gly Asp Glu Ser Leu Ile Thr
 85 90 95

His Asn Pro Ser Tyr Ser His Gly Arg Arg Ala Ile Leu His Ala Cys
 100 105 110

Val Val Pro His His Thr Glu Arg Arg Val Ala Ser Ile Ile Cys Arg
 115 120 125

Pro Gly Pro Arg
 130

<210> 194
 <211> 199
 <212> PRT
 <213> Homo sapien

<400> 194

Ile Ile Thr Ile Lys Leu Phe Lys Lys Lys Lys Lys Lys Gln Thr Lys
 1 5 10 15

Asn Ile Lys Thr Lys Lys Gln Lys Glu Lys Lys Lys Lys Gln Asn Arg
 20 25 30

Gly Ala Gly Ala Pro Gln Lys Lys Ser Arg Pro Arg Gly Ala Ala Pro
 35 40 45

Ile Thr Ala Arg Pro Pro Gly Phe Leu Val Ser Thr Gln Gln Gly Gly
 50 55 60

Ala Pro His Lys Asn Glu Arg Ala His Arg Ser His Asn Tyr Thr Gln
 65 70 75 80

Arg Glu Leu Arg Trp Pro Arg Pro His Thr Ser Thr Thr Gln Ser Trp
 85 90 95

Val His Pro Ala Ala Thr Lys Arg Trp Pro Gln Pro Gly Gly Asn Ile
 100 105 110

Leu Arg Gly Glu Lys Gly Asp Pro Leu Thr Leu Pro Gln Arg Glu Arg
 115 120 125

267

Gly Thr Ala Thr Gln Thr Ser Val Trp Gly Pro Pro Thr Asn Leu Pro
 130 135 140

His Ser Ser Thr Met Arg Asp Asp Leu His Tyr Gln Ile Ala Pro Leu
 145 150 155 160

Ala Arg Arg Ala Ala Thr Asn Arg Ser Ser His Thr Ile His Leu Ile
 165 170 175

His Thr Ala Val Ala Leu Ser Ser Thr Arg Val Trp Cys Leu Ile Thr
 180 185 190

Pro Asn Asp Gly Ser His Gln
 195

<210> 195
 <211> 259
 <212> PRT
 <213> Homo sapien

<400> 195

Met Glu Gly Arg Arg Gln Ala Arg Arg Leu Arg Gln Leu Ala Gly Ala
 1 5 10 15

Gly Ala Gln Gly Gly Ser Pro Ile Val Glu Ala Ala Glu Asn Cys His
 20 25 30

Gly Ala Ala Ser Val Gln Arg Ala Ser Leu Ile Tyr Ser Gly Arg Val
 35 40 45

Cys Ile Trp Gly Gly Val Gln Gly Ala Asp Lys Asp Arg Arg Ala Pro
 50 55 60

Gly Ala Ala Ala Gly Gly Ala Lys Thr Gly Thr Arg Met Ser Ala Pro
 65 70 75 80

Gln Arg Pro Trp Ala Leu Ala Ala Gly Ala Arg Arg Thr Pro Arg Glu
 85 90 95

Ala Gly Ile Ser Lys Ala Val Arg Pro Glu Ala Arg Pro Arg Leu Arg
 100 105 110

Thr Lys Thr Glu Leu Glu Asp Leu Gln Lys Lys Pro Pro Pro Tyr Leu
 115 120 125

268

Arg Asn Leu Ser Ser Asp Asp Ala Asn Val Leu Val Trp His Ala Leu
 130 135 140

Leu Leu Pro Asp Gln Pro Pro Tyr His Leu Lys Ala Phe Asn Leu Arg
 145 150 155 160

Ile Ser Phe Pro Pro Glu Tyr Pro Phe Lys Pro Pro Met Ile Lys Phe
 165 170 175

Thr Thr Lys Ile Tyr His Pro Asn Val Asp Glu Asn Gly Gln Ile Cys
 180 185 190

Leu Pro Ile Ile Ser Ser Glu Asn Trp Lys Pro Cys Thr Lys Thr Cys
 195 200 205

Gln Val Leu Glu Ala Leu Asn Val Leu Val Asn Arg Pro Asn Ile Arg
 210 215 220

Glu Pro Leu Arg Met Asp Leu Ala Asp Leu Leu Thr Gln Asn Pro Glu
 225 230 235 240

Leu Phe Arg Lys Asn Ala Glu Glu Phe Thr Leu Arg Phe Gly Val Asp
 245 250 255

Arg Pro Ser

<210> 196
 <211> 156
 <212> PRT
 <213> Homo sapien

<400> 196

Met Arg Arg Trp Thr Trp Lys Ala Ser Trp Ser Ser Glu Leu Glu Asp
 1 5 10 15

Leu Gln Lys Lys Pro Pro Pro Tyr Leu Arg Asn Leu Ser Ser Asp Asp
 20 25 30

Ala Asn Val Leu Val Trp His Ala Leu Leu Leu Pro Asp Gln Pro Pro
 35 40 45

Tyr His Leu Lys Ala Phe Asn Leu Arg Ile Ser Phe Pro Pro Glu Tyr
 50 55 60

Pro Phe Lys Pro Pro Met Ile Lys Phe Thr Thr Lys Ile Tyr His Pro
 65 70 75 80

269

Asn Val Asp Glu Asn Gly Gln Ile Cys Leu Pro Ile Ile Ser Ser Glu
85 90 95

Asn Trp Lys Pro Cys Thr Lys Thr Cys Gln Val Leu Glu Ala Leu Asn
100 105 110

Val Leu Val Asn Arg Pro Asn Ile Arg Glu Pro Leu Arg Met Asp Leu
115 120 125

Ala Asp Leu Leu Thr Gln Asn Pro Glu Leu Phe Arg Lys Asn Ala Glu
130 135 140

Glu Phe Thr Leu Arg Phe Gly Val Asp Arg Pro Ser
145 150 155

<210> 197

<211> 168

<212> PRT

<213> Homo sapien

<400> 197

Asn Leu Gly Gln Ser Ser Leu Ser Ile Leu Trp Arg Lys Arg Cys Gly
1 5 10 15

Gly Gly Pro Gly Arg Pro Pro Gly Glu Leu Glu Asp Leu Gln Lys Lys
20 25 30

Pro Pro Pro Tyr Leu Arg Asn Leu Ser Ser Asp Asp Ala Asn Val Leu
35 40 45

Val Trp His Ala Leu Leu Leu Pro Asp Gln Pro Pro Tyr His Leu Lys
50 55 60

Ala Phe Asn Leu Arg Ile Ser Phe Pro Pro Glu Tyr Pro Phe Lys Pro
65 70 75 80

Pro Met Ile Lys Phe Thr Thr Lys Ile Tyr His Pro Asn Val Asp Glu
85 90 95

Asn Gly Gln Ile Cys Leu Pro Ile Ile Ser Ser Glu Asn Trp Lys Pro
100 105 110

Cys Thr Lys Thr Cys Gln Val Leu Glu Ala Leu Asn Val Leu Val Asn
115 120 125

270

Arg Pro Asn Ile Arg Glu Pro Leu Arg Met Asp Leu Ala Asp Leu Leu
 130 135 140

Thr Gln Asn Pro Glu Leu Phe Arg Lys Asn Ala Glu Glu Phe Thr Leu
 145 150 155 160

Arg Phe Gly Val Asp Arg Pro Ser
 165

<210> 198
 <211> 137
 <212> PRT
 <213> Homo sapien

<400> 198

Met Glu Gly Arg Arg Gln Gly Asn Leu Ser Ser Asp Asp Ala Asn Val
 1 5 10 15

Leu Val Trp His Ala Leu Leu Leu Pro Asp Gln Pro Pro Tyr His Leu
 20 25 30

Lys Ala Phe Asn Leu Arg Ile Ser Phe Pro Pro Glu Tyr Pro Phe Lys
 35 40 45

Pro Pro Met Ile Lys Phe Thr Thr Lys Ile Tyr His Pro Asn Val Asp
 50 55 60

Glu Asn Gly Gln Ile Cys Leu Pro Ile Ile Ser Ser Glu Asn Trp Lys
 65 70 75 80

Pro Cys Thr Lys Thr Cys Gln Val Leu Glu Ala Leu Asn Val Leu Val
 85 90 95

Asn Arg Pro Asn Ile Arg Glu Pro Leu Arg Met Asp Leu Ala Asp Leu
 100 105 110

Leu Thr Gln Asn Pro Glu Leu Phe Arg Lys Asn Ala Glu Glu Phe Thr
 115 120 125

Leu Arg Phe Gly Val Asp Arg Pro Ser
 130 135

<210> 199
 <211> 237
 <212> PRT
 <213> Homo sapien

<400> 199

271

Met Met Ala Ser Met Arg Val Val Lys Glu Leu Glu Asp Leu Gln Lys
 1 5 10 15

Lys Pro Pro Pro Tyr Leu Arg Asn Leu Ser Ser Asp Asp Ala Asn Val
 20 25 30

Leu Val Trp His Ala Leu Leu Leu Pro Glu Ala Glu Val Ala Val Ser
 35 40 45

Arg Asp His Ala Ile Ala Leu Gln Pro Gly Gln Gln Ser Glu Thr Pro
 50 55 60

Ser Gln Lys Lys Lys Lys Lys Glu Ala Trp His Gln His Leu Leu Leu
 65 70 75 80

Met Arg Pro Ser Gly Ser Phe His Ser Trp Trp Lys Ala Lys Gly Ser
 85 90 95

His Val Tyr Arg Ser His Ala Arg Glu Glu Val Lys Glu Arg Glu Ser
 100 105 110

Glu Gln Val Pro Gly Ser Ser Lys Gln Pro Ala Phe Ser Asp Gln Pro
 115 120 125

Pro Tyr His Leu Lys Ala Phe Asn Leu Arg Ile Ser Phe Pro Pro Glu
 130 135 140

Tyr Pro Phe Lys Pro Pro Met Ile Lys Phe Thr Thr Lys Ile Tyr His
 145 150 155 160

Pro Asn Val Asp Glu Asn Gly Gln Ile Cys Leu Pro Ile Ile Ser Ser
 165 170 175

Glu Asn Trp Lys Pro Cys Thr Lys Thr Cys Gln Val Leu Glu Ala Leu
 180 185 190

Asn Val Leu Val Asn Arg Pro Asn Ile Arg Glu Pro Leu Arg Met Asp
 195 200 205

Leu Ala Asp Leu Leu Thr Gln Asn Pro Glu Leu Phe Arg Lys Asn Ala
 210 215 220

Glu Glu Phe Thr Leu Arg Phe Gly Val Asp Arg Pro Ser
 225 230 235

272

<210> 200
 <211> 156
 <212> PRT
 <213> Homo sapien

<400> 200

Gly Pro Gln Glu Ala Ser Thr His Gly Gly Arg Gln Arg Gly Ala Thr
 1 5 10 15

Cys Thr Asp His Ile Ala Arg Glu Glu Val Lys Glu Arg Glu Ser Glu
 20 25 30

Gln Val Pro Gly Ser Ser Lys Gln Pro Ala Phe Ser Asp Gln Pro Pro
 35 40 45

Tyr His Leu Lys Ala Phe Asn Leu Arg Ile Ser Phe Pro Pro Glu Tyr
 50 55 60

Pro Phe Lys Pro Pro Met Ile Lys Phe Thr Thr Lys Ile Tyr His Pro
 65 70 75 80

Asn Val Asp Glu Asn Gly Gln Ile Cys Leu Pro Ile Ile Ser Ser Glu
 85 90 95

Asn Trp Lys Pro Cys Thr Lys Thr Cys Gln Val Leu Glu Ala Leu Asn
 100 105 110

Val Leu Val Asn Arg Pro Asn Ile Arg Glu Pro Leu Arg Met Asp Leu
 115 120 125

Ala Asp Leu Leu Thr Gln Asn Pro Glu Leu Phe Arg Lys Asn Ala Glu
 130 135 140

Glu Phe Thr Leu Arg Phe Gly Val Asp Arg Pro Ser
 145 150 155

<210> 201
 <211> 88
 <212> PRT
 <213> Homo sapien

<400> 201

Met Val Gln Ala Gly Pro Ser Ser Cys Ser Ile Ser Gly Asp Pro Gly
 1 5 10 15

Leu Pro Arg Arg Trp Arg Pro Ala Gln Val Val Arg Pro Gly Arg Leu
 20 25 30

273

Arg Ile Arg Gly Trp Ser Arg Arg Ile Pro Lys Ala Glu Val Gly Ser
 35 40 45

Pro Gly Asp Ser Gln Leu Leu Ser Leu Trp Arg Arg Gly Pro Val Thr
 50 55 60

Glu Ala Pro Phe Ser Asn Pro Gly Ala Ala Phe Gln Arg Leu Asn Phe
 65 70 75 80

Ser Asn His Cys Phe Asn Ser Phe
 85

<210> 202
 <211> 40
 <212> PRT
 <213> Homo sapien

<400> 202

Met Glu Lys Gly Val Gly Gly Gln Pro Arg Gly Arg Arg Arg Ile Tyr
 1 5 10 15

Asn Ile Phe Phe Arg His Arg Cys Tyr Arg Lys Met Cys Glu Arg Ser
 20 25 30

Gly Cys Ala Ala Arg Thr Gly Ala
 35 40

<210> 203
 <211> 60
 <212> PRT
 <213> Homo sapien

<400> 203

Gly Pro Glu Lys Trp Arg Arg Gly Trp Gly Asp Ser His Val Ala Ala
 1 5 10 15

Gly Gly Phe Thr Thr Phe Ser Phe Ala Ile Asp Val Ile Ala Lys Cys
 20 25 30

Val Arg Glu Ala Ala Ala Gln Pro Gly Arg Glu Arg Glu Gly Ala Gly
 35 40 45

Gln Arg Phe Pro Pro Thr Gly Asn Leu Met Gly Leu
 50 55 60

<210> 204
 <211> 213

274

<212> PRT
 <213> Homo sapien

<220>
 <221> MISC_FEATURE
 <222> (5)..(5)
 <223> X=any amino acid

<400> 204

Met Pro Gln Asn Xaa Gly Val Ile Gly Leu Arg His His Phe Ala Ile
 1 5 10 15

His Tyr Pro Ala Gly Gly Gly Leu Trp Asp Gly Leu His Gly Val Ala
 20 25 30

Ala Val Gln Gly Ile Thr Lys Ile Lys Val Leu Ala Ile Tyr Ser Phe
 35 40 45

Cys Ser Gln Ile Cys Asp Pro Arg Thr Thr Gly Ala Phe Trp Gln Thr
 50 55 60

Trp Lys Asp Phe Glu Val Arg His Gly Asn Glu Asp Thr Ile Lys Glu
 65 70 75 80

Met Leu Arg Ile Arg Arg Ser Val Gln Ala Thr Tyr Asn Thr Gln Val
 85 90 95

Asn Phe Met Ala Ser Gln Met Leu Lys Val Ser Gly Ser Ala Thr Gly
 100 105 110

Thr Val Ser Asp Leu Ala Pro Gly Gln Ser Gly Met Asp Asp Met Lys
 115 120 125

Leu Leu Glu Gln Arg Ala Glu Gln Leu Ala Ala Glu Ala Glu Arg Asp
 130 135 140

Gln Pro Leu Arg Ala Gln Ser Lys Ile Leu Phe Val Arg Ser Asp Ala
 145 150 155 160

Ser Arg Glu Glu Leu Ala Glu Leu Ala Gln Gln Val Asn Pro Glu Glu
 165 170 175

Ile Gln Leu Gly Glu Asp Glu Asp Glu Asp Glu Met Asp Leu Glu Pro
 180 185 190

Asn Glu Val Arg Leu Glu Gln Gln Ser Val Pro Ala Ala Val Phe Gly
 195 200 205

275

Ser Leu Lys Glu Asp
210

<210> 205
<211> 458
<212> PRT
<213> Homo sapien

<400> 205

Met Ile Asp His Tyr Arg Gly Met Gly Pro Leu Met Leu Leu Glu Arg
1 5 10 15

Arg Ser Val Met Asp Arg Gly Arg Gly Arg Tyr Gln Tyr Ser Pro Gln
20 25 30

Asn Gln His Val Glu Gln Gln Pro His Tyr Thr His Lys Pro Thr Leu
35 40 45

Glu Tyr Ser Pro Phe Pro Ile Pro Pro Gln Ser Pro Ala Tyr Glu Pro
50 55 60

Asn Leu Phe Asp Gly Pro Glu Ser Gln Phe Cys Pro Asn Gln Ser Leu
65 70 75 80

Val Ser Leu Leu Gly Asp Gln Arg Glu Ser Glu Asn Ile Ala Asn Pro
85 90 95

Met Gln Thr Ser Ser Ser Val Gln Gln Gln Asn Asp Ala His Leu His
100 105 110

Ser Phe Ser Met Met Pro Ser Ser Ala Cys Glu Ala Met Val Gly His
115 120 125

Glu Met Ala Ser Asp Ser Ser Asn Thr Ser Leu Pro Phe Ser Asn Met
130 135 140

Gly Asn Pro Met Asn Thr Thr Gln Leu Gly Lys Ser Leu Phe Gln Trp
145 150 155 160

Gln Val Glu Gln Glu Glu Ser Lys Leu Ala Asn Ile Ser Gln Asp Gln
165 170 175

Phe Leu Ser Lys Asp Ala Asp Gly Asp Thr Phe Leu His Ile Ala Val
180 185 190

276

Ala Gln Gly Arg Arg Ala Leu Ser Tyr Val Leu Ala Arg Lys Met Asn
 195 200 205

Ala Leu His Met Leu Asp Ile Lys Glu His Asn Gly Gln Ser Ala Phe
 210 215 220

Gln Val Ala Val Ala Ala Asn Gln His Leu Ile Val Gln Asp Leu Val
 225 230 235 240

Asn Ile Gly Ala Gln Val Asn Thr Thr Asp Cys Trp Gly Arg Thr Pro
 245 250 255

Leu His Val Cys Ala Glu Lys Gly His Ser Gln Val Leu Gln Ala Ile
 260 265 270

Gln Lys Gly Ala Val Gly Ser Asn Gln Phe Val Asp Leu Glu Ala Thr
 275 280 285

Asn Tyr Asp Gly Leu Thr Pro Leu His Cys Ala Val Ile Ala His Asn
 290 295 300

Ala Val Val His Glu Leu Gln Arg Asn Gln Gln Pro His Ser Pro Glu
 305 310 315 320

Val Gln Glu Leu Leu Leu Lys Asn Lys Ser Leu Val Asp Thr Ile Lys
 325 330 335

Cys Leu Ile Gln Met Gly Ala Ala Val Glu Ala Lys Asp Arg Lys Ser
 340 345 350

Gly Arg Thr Ala Leu His Leu Ala Ala Glu Glu Ala Asn Leu Glu Leu
 355 360 365

Ile Arg Leu Phe Leu Glu Leu Pro Ser Cys Leu Ser Phe Val Asn Ala
 370 375 380

Lys Ala Tyr Asn Gly Asn Thr Ala Leu His Val Ala Ala Ser Leu Gln
 385 390 395 400

Tyr Arg Leu Thr Gln Leu Asp Ala Val Arg Leu Leu Met Arg Lys Gly
 405 410 415

Ala Asp Pro Ser Thr Arg Asn Leu Glu Asn Glu Gln Pro Val His Leu
 420 425 430

Val Pro Asp Gly Pro Val Gly Glu Gln Ile Arg Arg Ile Leu Lys Gly

277

435

440

445

Lys Ser Ile Gln Gln Arg Ala Pro Pro Tyr
 450 455

<210> 206

<211> 439

<212> PRT

<213> Homo sapien

<400> 206

Trp Ile Val Val Ala Ala Arg Tyr Gln Tyr Ser Pro Gln Asn Gln His
 1 5 10 15

Val Glu Gln Gln Pro His Tyr Thr His Lys Pro Thr Leu Glu Tyr Ser
 20 25 30

Pro Phe Pro Ile Pro Pro Gln Ser Pro Ala Tyr Glu Pro Asn Leu Phe
 35 40 45

Asp Gly Pro Glu Ser Gln Phe Cys Pro Asn Gln Ser Leu Val Ser Leu
 50 55 60

Leu Gly Asp Gln Arg Glu Ser Glu Asn Ile Ala Asn Pro Met Gln Thr
 65 70 75 80

Ser Ser Ser Val Gln Gln Gln Asn Asp Ala His Leu His Ser Phe Ser
 85 90 95

Met Met Pro Ser Ser Ala Cys Glu Ala Met Val Gly His Glu Met Ala
 100 105 110

Ser Asp Ser Ser Asn Thr Ser Leu Pro Phe Ser Asn Met Gly Asn Pro
 115 120 125

Met Asn Thr Thr Gln Leu Gly Lys Ser Leu Phe Gln Trp Gln Val Glu
 130 135 140 1

Gln Glu Glu Ser Lys Leu Ala Asn Ile Ser Gln Asp Gln Phe Leu Ser
 145 150 155 160

Lys Asp Ala Asp Gly Asp Thr Phe Leu His Ile Ala Val Ala Gln Gly
 165 170 175

Arg Arg Ala Leu Ser Tyr Val Leu Ala Arg Lys Met Asn Ala Leu His
 180 185 190

278

Met Leu Asp Ile Lys Glu His Asn Gly Gln Ser Ala Phe Gln Val Ala
 195 200 205

Val Ala Ala Asn Gln His Leu Ile Val Gln Asp Leu Val Asn Ile Gly
 210 215 220

Ala Gln Val Asn Thr Thr Asp Cys Trp Gly Arg Thr Pro Leu His Val
 225 230 235 240

Cys Ala Glu Lys Gly His Ser Gln Val Leu Gln Ala Ile Gln Lys Gly
 245 250 255

Ala Val Gly Ser Asn Gln Phe Val Asp Leu Glu Ala Thr Asn Tyr Asp
 260 265 270

Gly Leu Thr Pro Leu His Cys Ala Val Ile Ala His Asn Ala Val Val
 275 280 285

His Glu Leu Gln Arg Asn Gln Gln Pro His Ser Pro Glu Val Gln Glu
 290 295 300

Leu Leu Leu Lys Asn Lys Ser Leu Val Asp Thr Ile Lys Cys Leu Ile
 305 310 315 320

Gln Met Gly Ala Ala Val Glu Ala Lys Asp Arg Lys Ser Gly Arg Thr
 325 330 335

Ala Leu His Leu Ala Ala Glu Glu Ala Asn Leu Glu Leu Ile Arg Leu
 340 345 350

Phe Leu Glu Leu Pro Ser Cys Leu Ser Phe Val Asn Ala Lys Ala Tyr
 355 360 365

Asn Gly Asn Thr Ala Leu His Val Ala Ala Ser Leu Gln Tyr Arg Leu
 370 375 380

Thr Gln Leu Asp Ala Val Arg Leu Leu Met Arg Lys Gly Ala Asp Pro
 385 390 395 400

Ser Thr Arg Asn Leu Glu Asn Glu Gln Pro Val His Leu Val Pro Asp
 405 410 415

Gly Pro Val Gly Glu Gln Ile Arg Arg Ile Leu Lys Gly Lys Ser Ile
 420 425 430

279

Gln Gln Arg Ala Pro Pro Tyr
435

<210> 207
<211> 130
<212> PRT
<213> Homo sapien

<400> 207

Met Gln Pro Leu Trp Leu Cys Trp Ala Leu Trp Val Leu Pro Leu Ala
1 5 10 15

Ser Pro Gly Ala Ala Leu Thr Gly Glu Gln Leu Leu Gly Ser Leu Leu
20 25 30

Arg Gln Leu Gln Leu Lys Glu Val Pro Thr Leu Asp Arg Ala Asp Met
35 40 45

Glu Glu Leu Val Ile Pro Thr His Val Arg Ala Gln Tyr Val Ala Leu
50 55 60

Leu Gln Arg Ser His Gly Asp Arg Ser Arg Gly Lys Arg Phe Ser Gln
65 70 75 80

Ser Phe Arg Glu Val Ala Gly Arg Phe Leu Ala Leu Glu Ala Ser Thr
85 90 95

His Leu Leu Val Phe Gly Met Glu Gln Arg Leu Pro Pro Asn Ser Glu
100 105 110

Leu Val Gln Ala Val Leu Arg Leu Phe Gln Glu Cys Thr Leu Thr Cys
115 120 125

Arg Gly
130

<210> 208
<211> 243
<212> PRT
<213> Homo sapien

<400> 208

Asp Pro Pro Ala Ala Phe Ser Arg Asp Ser Pro Thr Leu Pro Leu Ala
1 5 10 15

Pro Pro Gly Gln His His Ala Ala Pro Val Ala Leu Leu Gly Thr Leu
20 25 30

280

Gly Val Ala Pro Gly Gln Pro Arg Gly Arg Pro Asp Arg Gly Ala Ala
 35 40 45

Pro Gly Gln Pro Ala Ala Ala Ala Ala Ala Gln Arg Gly Ala His Pro
 50 55 60

Gly Gln Gly Arg His Gly Gly Ala Gly His Pro His Pro Arg Glu Gly
 65 70 75 80

Pro Val Arg Gly Pro Ala Ala Ala Gln Pro Arg Gly Pro Leu Pro Arg
 85 90 95

Lys Glu Val Gln Pro Glu Leu Pro Arg Gly Gly Arg Gln Val Pro Gly
 100 105 110

Val Gly Gly Gln His Thr Pro Ala Gly Val Arg His Gly Ala Ala Ala
 115 120 125

Ala Ala Gln Gln Arg Ala Gly Ala Gly Arg Ala Ala Ala Leu Pro Gly
 130 135 140

Met Tyr Ile Asp Leu Gln Gly Met Lys Trp Ala Glu Asn Trp Val Leu
 145 150 155 160

Glu Pro Pro Gly Phe Leu Ala Tyr Glu Cys Val Gly Thr Cys Arg Gln
 165 170 175

Pro Pro Glu Ala Leu Ala Phe Lys Trp Pro Phe Leu Gly Pro Arg Gln
 180 185 190

Cys Ile Ala Ser Glu Thr Asp Ser Leu Pro Met Ile Val Ser Ile Lys
 195 200 205

Glu Gly Gly Arg Thr Arg Pro Gln Val Val Ser Leu Pro Asn Met Arg
 210 215 220

Val Gln Lys Cys Ser Cys Ala Ser Asp Gly Ala Leu Val Pro Arg Arg
 225 230 235 240

Leu Gln Pro

<210> 209

<211> 204

<212> PRT

<213> Homo sapien

281

<400> 209

Met Glu Arg Leu Thr Leu Pro Leu Gly Gly Ala Ala Ala Val Asp Glu
 1 5 10 15

Tyr Leu Glu Tyr Arg Arg Tyr Lys Gln His Lys Thr Asp Leu Glu Ala
 20 25 30

Ile Pro Gln Gln Cys Pro Ile Asp Leu Pro Cys Gln Val Thr Gly Cys
 35 40 45

Gln Cys Arg Ala Tyr Leu Tyr Val Pro Leu Asn Gly Ser Gln Pro Ile
 50 55 60

Arg Cys Arg Cys Lys His Phe Ala Asp Gln His Ser Ala Ala Pro Gly
 65 70 75 80

Phe Thr Cys Asn Thr Cys Ser Lys Cys Ser Gly Phe His Ser Cys Phe
 85 90 95

Thr Cys Ala Cys Gly Gln Pro Ala Tyr Ala His Asp Thr Val Val Glu
 100 105 110

Thr Lys Gln Glu Arg Leu Ala Gln Glu Lys Pro Val Gly Gln Asp Ile
 115 120 125

Pro Tyr Ala Ala Met Gly Gly Leu Thr Gly Phe Ser Ser Leu Ala Glu
 130 135 140

Gly Tyr Met Arg Leu Asp Asp Ser Gly Ile Val Gly Thr Ser Ser Gln
 145 150 155 160

Val Ser Ser Leu Arg Arg Pro Glu Glu Asp Asp Met Ala Phe Phe Glu
 165 170 175

Arg Arg Tyr Gln Glu Arg Met Lys Met Glu Lys Ala Ala Lys Trp Lys
 180 185 190

Gly Lys Ala Pro Leu Pro Ser Ala Thr Lys Pro Ser
 195 200

<210> 210

<211> 80

<212> PRT

<213> Homo sapien

<400> 210

282

Glu Val Gln Glu Ala Ile Phe Phe Arg Val Cys Gly Ala Arg Ser Val
 1 5 10 15

Val Leu Leu Leu Val Ala Val Arg Leu His Thr Leu Leu Ser Cys Pro
 20 25 30

Leu Glu Gln Pro Ala Gly Thr Glu Trp Ile Leu Glu Glu Gly Val Thr
 35 40 45

Thr Gly Pro Pro Arg Lys Pro Arg Ala Asp Ile Tyr Asn Leu Arg Ser
 50 55 60

Pro Asp Glu Phe Ile Val Gly Gln Asn Gln Ala Leu Ile Glu Pro Gly
 65 70 75 80

<210> 211
 <211> 84
 <212> PRT
 <213> Homo sapien

<400> 211

Glu Gln Gln Pro Ser Pro Ile Asp Ser Thr Glu Thr Thr Arg Asn Gln
 1 5 10 15

Gln Val Arg Pro Thr Thr Ser Arg Asn Lys Arg Arg Ala Ala Ser Gln
 20 25 30

His Ile Ser Lys Ala Thr Arg Pro Thr Ala Lys Arg Gln Ala Ala Asp
 35 40 45

Ser Asp Ile Thr Thr Ser Gly Pro Thr Ala Thr Thr Thr Asp Asp Lys
 50 55 60

Asn Asp Val Cys Glu Asp Thr Pro His Arg Arg Thr Thr Gly Trp His
 65 70 75 80

Gln Arg Asp Leu

<210> 212
 <211> 56
 <212> PRT
 <213> Homo sapien

<400> 212

Pro Leu Trp Arg Arg Leu Leu Leu Gly Ser Arg Leu Leu Leu Pro Cys
 1 5 10 15

283

Asn Arg Asn Trp Arg Trp Asn Met Arg Gly Ala Leu Trp Lys Glu Lys
 20 25 30

Asp Arg Pro Cys Ala Phe Met Lys Val Lys Ile Trp Leu Asn Gln Phe
 35 40 45

His Lys Val Thr Val Tyr Ile Ala
 50 55

<210> 213
 <211> 451
 <212> PRT
 <213> Homo sapien

<400> 213

Met Phe Leu Leu Leu Leu His Leu Gln Ile Lys Trp Arg Ala Thr Ile
 1 5 10 15

Asn Leu Leu Ser Val Thr Glu Asp Gly Leu His Phe Val Glu Tyr Tyr
 20 25 30

Leu Asn Arg Ile Ile His Leu Asp Val Asp Ser Glu Ala Lys Lys Leu
 35 40 45

Leu Gly Leu Gly Gln Lys His Leu Val Met Gly Asp Ile Pro Ala Ala
 50 55 60

Val Asn Ala Phe Gln Glu Ala Ala Ser Leu Leu Gly Lys Lys Tyr Gly
 65 70 75 80

Glu Thr Ala Asn Glu Cys Gly Glu Ala Phe Phe Phe Tyr Gly Lys Ser
 85 90 95

Leu Leu Glu Leu Ala Arg Met Glu Asn Gly Val Leu Gly Asn Ala Leu
 100 105 110

Glu Gly Val His Val Glu Glu Glu Glu Gly Glu Lys Thr Glu Asp Glu
 115 120 125

Ser Leu Val Glu Asn Asn Asp Asn Ile Asp Glu Thr Glu Gly Ser Glu
 130 135 140

Glu Asp Asp Lys Glu Asn Asp Lys Thr Glu Glu Met Pro Asn Asp Ser
 145 150 155 160

284

Val Leu Glu Asn Lys Ser Leu Gln Glu Asn Glu Glu Glu Glu Ile Gly
 165 170 175

Asn Leu Glu Leu Ala Trp Asp Met Leu Asp Leu Ala Lys Ile Ile Phe
 180 185 190

Lys Arg Gln Glu Thr Lys Glu Ala Gln Leu Tyr Ala Ala Gln Ala His
 195 200 205

Leu Lys Leu Gly Glu Val Ser Val Glu Ser Glu Asn Tyr Val Gln Ala
 210 215 220

Val Glu Glu Phe Gln Ser Cys Leu Asn Leu Gln Glu Gln Tyr Leu Glu
 225 230 235 240

Ala His Asp Arg Leu Leu Ala Glu Thr His Tyr Gln Leu Gly Leu Ala
 245 250 255

Tyr Gly Tyr Asn Ser Gln Tyr Asp Glu Ala Val Ala Gln Phe Ser Lys
 260 265 270

Ser Ile Glu Val Ile Glu Asn Arg Met Ala Val Leu Asn Glu Gln Val
 275 280 285

Lys Glu Ala Glu Gly Ser Ser Ala Glu Tyr Lys Lys Glu Ile Glu Glu
 290 295 300

Leu Lys Glu Leu Leu Pro Glu Ile Arg Glu Lys Ile Glu Asp Ala Lys
 305 310 315 320

Glu Ser Gln Arg Ser Gly Asn Val Ala Glu Leu Ala Leu Lys Ala Thr
 325 330 335

Leu Val Glu Ser Ser Thr Ser Gly Phe Thr Pro Gly Gly Gly Gly Ser
 340 345 350

Ser Val Ser Met Ile Ala Ser Arg Lys Pro Thr Asp Gly Ala Ser Ser
 355 360 365

Ser Asn Cys Val Thr Asp Ile Ser His Leu Val Arg Lys Lys Arg Lys
 370 375 380

Pro Glu Glu Glu Ser Pro Arg Lys Asp Asp Ala Lys Lys Ala Lys Gln
 385 390 395 400

Glu Pro Glu Val Asn Gly Gly Ser Gly Asp Ala Val Pro Ser Gly Asn

285

405 410 415

Glu Val Ser Glu Asn Met Glu Glu Glu Ala Glu Asn Gln Ala Glu Ser
420 425 430

Arg Ala Ala Val Glu Gly Thr Val Glu Ala Gly Ala Thr Val Glu Ser
435 440 445

Thr Ala Cys
450

<210> 214
<211> 337
<212> PRT
<213> Homo sapien

<400> 214

Met Ala His Ala Pro Ala Arg Cys Pro Ser Ala Arg Gly Ser Gly Asp
1 5 10 15

Gly Glu Met Gly Lys Pro Arg Asn Val Ala Leu Ile Thr Gly Ile Thr
20 25 30

Gly Gln Asp Gly Ser Tyr Leu Ala Glu Phe Leu Leu Glu Lys Gly Tyr
35 40 45

Glu Val His Gly Ile Val Arg Arg Ser Ser Ser Phe Asn Thr Gly Arg
50 55 60

Ile Glu His Leu Tyr Lys Asn Pro Gln Ala His Ile Glu Gly Asn Met
65 70 75 80

Lys Leu His Tyr Gly Asp Leu Thr Asp Ser Thr Cys Leu Val Lys Ile
85 90 95

Ile Asn Glu Val Lys Pro Thr Glu Ile Tyr Asn Leu Gly Ala Gln Ser
100 105 110

His Val Lys Ile Ser Phe Asp Leu Ala Glu Tyr Thr Ala Asp Val Asp
115 120 125

Gly Val Gly Thr Leu Arg Leu Leu Asp Ala Val Lys Thr Cys Gly Leu
130 135 140

Ile Asn Ser Val Lys Phe Tyr Gln Ala Ser Thr Ser Glu Leu Tyr Gly
145 150 155 160

286

Lys Val Gln Glu Ile Pro Gln Lys Glu Thr Thr Pro Phe Tyr Pro Arg
 165 170 175

Ser Pro Tyr Gly Ala Asn Phe Val Thr Arg Lys Ile Ser Arg Ser Val
 180 185 190

Ala Lys Ile Tyr Leu Gly Gln Leu Glu Cys Phe Ser Leu Gly Asn Leu
 195 200 205

Asp Ala Lys Arg Asp Trp Gly His Ala Lys Asp Tyr Val Glu Ala Met
 210 215 220

Trp Leu Met Leu Gln Asn Asp Glu Pro Glu Asp Phe Val Ile Ala Thr
 225 230 235 240

Gly Glu Val His Ser Val Arg Glu Phe Val Glu Lys Ser Phe Leu His
 245 250 255

Ile Gly Lys Thr Ile Val Trp Glu Gly Lys Asn Glu Asn Glu Val Gly
 260 265 270

Arg Cys Lys Glu Thr Gly Lys Val His Val Thr Val Asp Leu Lys Tyr
 275 280 285

Tyr Arg Pro Thr Glu Val Asp Phe Leu Gln Gly Asp Cys Thr Lys Ala
 290 295 300

Lys Gln Lys Leu Asn Trp Lys Pro Arg Val Ala Phe Asp Glu Leu Val
 305 310 315 320

Arg Glu Met Val His Ala Asp Val Glu Leu Met Arg Thr Asn Pro Asn
 325 330 335

Ala

<210> 215

<211> 332

<212> PRT

<213> Homo sapien

<400> 215

Met Ala His Ala Pro Ala Arg Cys Pro Ser Ala Arg Gly Ser Gly Asp
 1 5 10 15

Gly Glu Met Gly Lys Pro Arg Asn Val Ala Leu Ile Thr Gly Ile Thr

287

20

25

30

Gly Gln Asp Gly Ser Tyr Leu Ala Glu Phe Leu Leu Glu Lys Gly Tyr
 35 40 45

Glu Val His Gly Ile Val Arg Arg Ser Ser Ser Phe Asn Thr Gly Arg
 50 55 60

Ile Glu His Leu Tyr Lys Asn Pro Gln Ala His Ile Glu Gly Asn Met
 65 70 75 80

Lys Leu His Tyr Gly Asp Leu Thr Asp Ser Thr Cys Leu Val Lys Ile
 85 90 95

Ile Asn Glu Val Lys Pro Thr Glu Ile Tyr Asn Leu Gly Ala Gln Ser
 100 105 110

His Val Lys Ile Ser Phe Asp Leu Ala Glu Tyr Thr Ala Asp Val Asp
 115 120 125

Gly Val Gly Thr Leu Arg Leu Leu Asp Ala Val Lys Thr Cys Gly Leu
 130 135 140

Ile Asn Ser Val Lys Phe Tyr Gln Ala Ser Thr Ser Glu Leu Tyr Gly
 145 150 155 160

Lys Val Gln Glu Ile Pro Gln Lys Glu Thr Thr Pro Phe Tyr Pro Arg
 165 170 175

Ser Pro Tyr Gly Ala Ala Lys Leu Tyr Ala Tyr Trp Ile Val Val Asn
 180 185 190

Phe Arg Glu Ala Tyr Asn Leu Phe Ala Val Asn Gly Ile Leu Phe Asn
 195 200 205

His Glu Ser Pro Arg Arg Gly Ala Asn Phe Val Thr Arg Lys Ile Ser
 210 215 220

Arg Ser Val Ala Lys Ile Tyr Leu Gly Gln Leu Glu Cys Phe Ser Leu
 225 230 235 240

Gly Asn Leu Asp Ala Lys Arg Asp Trp Gly His Ala Lys Asp Tyr Val
 245 250 255

Glu Ala Met Trp Leu Met Leu Gln Asn Asp Glu Pro Glu Asp Phe Val
 260 265 270

288

Ile Ala Thr Gly Glu Val His Ser Val Arg Glu Phe Val Glu Lys Ser
 275 280 285

Phe Leu His Ile Gly Lys Thr Ile Val Trp Glu Gly Lys Asn Glu Asn
 290 295 300

Glu Val Gly Arg Cys Lys Glu Thr Gly Lys Val His Val Thr Val Asp
 305 310 315 320

Leu Lys Tyr Tyr Arg Pro Thr Glu Val Glu Thr Asn
 325 330

<210> 216

<211> 382

<212> PRT

<213> Homo sapien

<400> 216

Met Ala His Ala Pro Ala Arg Cys Pro Ser Ala Arg Gly Ser Gly Asp
 1 5 10 15

Gly Glu Met Gly Lys Pro Arg Asn Val Ala Leu Ile Thr Gly Ile Thr
 20 25 30

Gly Gln Asp Gly Ser Tyr Leu Ala Glu Phe Leu Leu Glu Lys Gly Tyr
 35 40 45

Glu Val His Gly Ile Val Arg Arg Ser Ser Ser Phe Asn Thr Gly Arg
 50 55 60

Ile Glu His Leu Tyr Lys Asn Pro Gln Ala His Ile Glu Gly Asn Met
 65 70 75 80

Lys Leu His Tyr Gly Asp Leu Thr Asp Ser Thr Cys Leu Val Lys Ile
 85 90 95

Ile Asn Glu Val Lys Pro Thr Glu Ile Tyr Asn Leu Gly Ala Gln Ser
 100 105 110

His Val Lys Ile Ser Phe Asp Leu Ala Glu Tyr Thr Ala Asp Val Asp
 115 120 125

Gly Val Gly Thr Leu Arg Leu Leu Asp Ala Val Lys Thr Cys Gly Leu
 130 135 140

289

Ile Asn Ser Val Lys Phe Tyr Gln Ala Ser Thr Ser Glu Leu Tyr Gly
 145 150 155 160

Lys Val Gln Glu Ile Pro Gln Lys Glu Thr Thr Pro Phe Tyr Pro Arg
 165 170 175

Ser Pro Tyr Gly Ala Ala Lys Leu Tyr Ala Tyr Trp Ile Val Val Asn
 180 185 190

Phe Arg Glu Ala Tyr Asn Leu Phe Ala Val Asn Gly Ile Leu Phe Asn
 195 200 205

His Glu Ser Pro Arg Arg Gly Ala Asn Phe Val Thr Arg Lys Ile Ser
 210 215 220

Arg Ser Val Ala Lys Ile Tyr Leu Gly Gln Leu Glu Cys Phe Ser Leu
 225 230 235 240

Gly Asn Leu Asp Ala Lys Arg Asp Trp Gly His Ala Lys Asp Tyr Val
 245 250 255

Glu Ala Met Trp Leu Met Leu Gln Asn Asp Glu Pro Glu Asp Phe Val
 260 265 270

Ile Ala Thr Gly Glu Val His Ser Val Arg Glu Phe Val Glu Lys Ser
 275 280 285

Phe Leu His Ile Gly Lys Thr Ile Val Trp Glu Gly Lys Asn Glu Asn
 290 295 300

Glu Val Gly Arg Cys Lys Glu Thr Gly Lys Val His Val Thr Val Asp
 305 310 315 320

Leu Lys Tyr Tyr Arg Pro Thr Glu Val Val Arg Thr Leu Trp Pro Pro
 325 330 335

Ser Ala Trp Pro Arg Leu Ala Gly Trp Leu Gly Lys Cys Ala His Gly
 340 345 350

Met Pro Gly Ala Ser Leu Trp Ser Cys Gln Phe Ser Ser Leu Ala Ser
 355 360 365

Phe Ser Val His Phe Gln Asn Gln Asn Thr Val Asn Ser Ile
 370 375 380

<210> 217

290

<211> 258

<212> PRT

<213> Homo sapien

<400> 217

Met Asn Ser Asn Val Glu Asn Leu Pro Pro His Ile Ile Arg Leu Val
 1 5 10 15

Tyr Lys Glu Val Thr Thr Leu Thr Ala Asp Pro Pro Asp Gly Ile Lys
 20 25 30

Val Phe Pro Asn Glu Glu Asp Leu Thr Asp Leu Gln Val Thr Ile Glu
 35 40 45

Gly Pro Glu Gly Thr Pro Tyr Ala Gly Gly Leu Phe Arg Met Lys Leu
 50 55 60

Leu Leu Gly Lys Asp Phe Pro Ala Ser Pro Pro Lys Gly Tyr Phe Leu
 65 70 75 80

Thr Lys Ile Phe His Pro Asn Val Gly Ala Asn Gly Glu Ile Cys Val
 85 90 95

Asn Val Leu Lys Arg Asp Trp Thr Ala Glu Leu Gly Ile Arg His Val
 100 105 110

Leu Leu Thr Ile Lys Cys Leu Leu Ile His Pro Asn Pro Glu Ser Ala
 115 120 125

Leu Asn Glu Glu Ala Gly Arg Leu Leu Leu Glu Asn Tyr Glu Glu Tyr
 130 135 140

Ala Ala Arg Ala Arg Leu Leu Thr Glu Ile His Gly Gly Ala Gly Gly
 145 150 155 160

Pro Ser Gly Arg Ala Glu Ala Gly Arg Ala Leu Ala Ser Gly Thr Glu
 165 170 175

Ala Ser Ser Thr Asp Pro Gly Ala Pro Gly Arg Arg Ala Glu Val His
 180 185 190

Trp Pro Glu His Val Gly Arg Glu Arg Arg Trp Gly Arg Lys Thr Thr
 195 200 205

Asp Gly Ala Arg Val Lys Val Phe Leu Ser Arg Asp His Ser Ala Pro
 210 215 220

291

Asn Phe Ser Asn Cys Gly Pro Ser Gly Arg Arg Val Asn Ala Gln Thr
 225 230 235 240

Lys Lys Pro Ser Arg Lys Gly Val Leu Ser Ala Ala Phe Gln Ala Ser
 245 250 255

Leu Leu

<210> 218
 <211> 262
 <212> PRT
 <213> Homo sapien

<400> 218

Met Arg Ala Val Ile Lys Arg Gln Trp Cys Ala Arg Gly Arg Leu Ser
 1 5 10 15

Ala Ala Gly His Arg Gly Gly Gly Leu Val Tyr Ala Val Arg Gly Gly
 20 25 30

Arg Arg Arg Gln Arg Gly Ala Glu Arg Gly Arg Arg Gly Leu Ser Arg
 35 40 45

Ala Ala Ala Ala Ala Val Gly Pro Pro Ala Pro Ala Gly Gly Pro Lys
 50 55 60

Asn Leu Pro Pro His Ile Ile Arg Leu Val Tyr Lys Glu Val Thr Thr
 65 70 75 80

Leu Thr Ala Asp Pro Pro Asp Gly Ile Lys Val Phe Pro Asn Glu Glu
 85 90 95

Asp Leu Thr Asp Leu Gln Val Thr Ile Glu Gly Pro Glu Gly Thr Pro
 100 105 110

Tyr Ala Gly Gly Leu Phe Arg Met Lys Leu Leu Leu Gly Lys Asp Phe
 115 120 125

Pro Ala Ser Pro Pro Lys Gly Tyr Phe Leu Thr Lys Ile Phe His Pro
 130 135 140

Asn Val Gly Ala Asn Gly Glu Ile Cys Val Asn Val Leu Lys Arg Asp
 145 150 155 160

Trp Thr Ala Glu Leu Gly Ile Arg His Val Leu Leu Thr Ile Lys Cys

292

165 170 175

Leu Leu Ile His Pro Asn Pro Glu Ser Ala Leu Asn Glu Glu Ala Gly
 180 185 190

Arg Leu Leu Leu Glu Asn Tyr Glu Glu Tyr Ala Ala Arg Ala Arg Leu
 195 200 205

Leu Thr Glu Ile His Gly Gly Ala Gly Gly Pro Ser Gly Arg Ala Glu
 210 215 220

Ala Gly Arg Ala Leu Ala Ser Gly Thr Glu Ala Ser Ser Thr Asp Pro
 225 230 235 240

Gly Ala Pro Gly Gly Pro Gly Gly Ala Glu Gly Ser His Gly Gln Glu
 245 250 255

Ala Cys Trp Arg Ala Arg
 260

<210> 219
 <211> 291
 <212> PRT
 <213> Homo sapien

<400> 219

Gly Ser Glu Leu Arg Gly Arg Gly Gly Arg Gly Leu Arg Ala Val Ile
 1 5 10 15

Lys Arg Gln Trp Cys Ala Arg Gly Arg Leu Ser Ala Ala Gly His Arg
 20 25 30

Gly Gly Gly Leu Val Tyr Ala Val Arg Gly Gly Arg Arg Arg Gln Arg
 35 40 45

Gly Ala Glu Arg Gly Arg Arg Gly Leu Ser Arg Ala Ala Ala Ala Ala
 50 55 60

Val Gly Pro Pro Ala Pro Ala Gly Gly Pro Lys Asn Leu Pro Pro His
 65 70 75 80

Ile Ile Arg Leu Val Tyr Lys Glu Val Thr Thr Leu Thr Ala Asp Pro
 85 90 95

Pro Asp Gly Ile Lys Val Phe Pro Asn Glu Glu Asp Leu Thr Asp Leu
 100 105 110

293

Gln Val Thr Ile Glu Gly Pro Glu Gly Thr Pro Tyr Ala Gly Gly Leu
 115 120 125

Phe Arg Met Lys Leu Leu Leu Gly Lys Asp Phe Pro Ala Ser Pro Pro
 130 135 140

Lys Gly Tyr Phe Leu Thr Lys Ile Phe His Pro Asn Val Gly Ala Asn
 145 150 155 160

Gly Glu Ile Cys Val Asn Val Leu Lys Arg Asp Trp Thr Ala Glu Leu
 165 170 175

Gly Ile Arg His Val Leu Leu Thr Ile Lys Cys Leu Leu Ile His Pro
 180 185 190

Asn Pro Glu Ser Ala Leu Asn Glu Glu Ala Gly Arg Leu Leu Leu Glu
 195 200 205

Asn Tyr Glu Glu Tyr Ala Ala Arg Ala Arg Leu Leu Thr Glu Ile His
 210 215 220

Gly Gly Ala Gly Gly Pro Ser Gly Arg Ala Glu Ala Gly Arg Ala Leu
 225 230 235 240

Ala Ser Gly Thr Glu Ala Ser Ser Thr Asp Pro Gly Ala Pro Gly Gly
 245 250 255

Pro Gly Gly Ala Glu Gly Pro Met Ala Lys Lys His Ala Gly Glu Arg
 260 265 270

Asp Lys Lys Leu Ala Ala Lys Lys Lys Thr Asp Lys Lys Arg Ala Leu
 275 280 285

Arg Arg Leu
 290

<210> 220
 <211> 233
 <212> PRT
 <213> Homo sapien

<400> 220

Met Asn Ser Asn Val Glu Asn Leu Pro Pro His Ile Ile Arg Leu Val
 1 5 10 15

Tyr Lys Glu Val Thr Thr Leu Thr Ala Asp Pro Pro Asp Gly Ile Lys

294

20

25

30

Val Phe Pro Asn Glu Glu Asp Leu Thr Asp Leu Gln Val Thr Ile Glu
 35 40 45

Gly Pro Glu Gly Thr Pro Tyr Ala Gly Gly Leu Phe Arg Met Lys Leu
 50 55 60

Leu Leu Gly Lys Asp Phe Pro Ala Ser Pro Pro Lys Gly Tyr Phe Leu
 65 70 75 80

Thr Lys Ile Phe His Pro Asn Val Gly Ala Asn Gly Glu Ile Cys Val
 85 90 95

Asn Val Leu Lys Arg Asp Trp Thr Ala Glu Leu Gly Ile Arg His Val
 100 105 110

Leu Leu Leu Ser Trp Lys Asp Lys Gln Cys Gln Thr Gln Asp Thr Gln
 115 120 125

Val Leu Leu Arg Ser Ala Gln Glu His Leu Thr Met Gln Arg Val Thr
 130 135 140

Ile Lys Cys Leu Leu Ile His Pro Asn Pro Glu Ser Ala Leu Asn Glu
 145 150 155 160

Glu Ala Gly Arg Leu Leu Leu Glu Asn Tyr Glu Glu Tyr Ala Ala Arg
 165 170 175

Ala Arg Leu Leu Thr Glu Ile His Gly Gly Ala Gly Gly Pro Ser Gly
 180 185 190

Arg Ala Glu Ala Gly Arg Ala Leu Ala Ser Gly Thr Glu Ala Ser Ser
 195 200 205

Thr Asp Pro Gly Ala Pro Gly Gly Pro Gly Gly Ala Glu Gly Ser His
 210 215 220

Gly Gln Glu Ala Cys Trp Arg Ala Arg
 225 230

<210> 221

<211> 390

<212> PRT

<213> Homo sapien

<400> 221

295

Glu Pro Ser Arg Pro Pro Arg Ala Pro Ile Gly Arg Pro Ala Thr Gln
 1 5 10 15
 Pro Ser Pro Pro Leu Pro Ser Leu Leu Thr Ile Val Cys Gly Glu Gly
 20 25 30
 Ser Glu Arg Val Glu Asn Gln Gly Thr Cys Ala Leu Thr Ser Arg Leu
 35 40 45
 Arg Leu Gly Ala Glu Gly Pro Arg Arg Ala Trp Pro Ala Gly Gly Tyr
 50 55 60
 Lys Glu Ala Val Val Arg Ala Arg Pro Ala Gln Cys Cys Arg Ala Pro
 65 70 75 80
 Gly Arg Arg Val Gly Leu Arg Cys Ala Arg Arg Thr Ser Glu Ala Ala
 85 90 95
 Gly Ser Gly Ala Gly Pro Pro Gly Pro Leu Gln Gly Arg Ser Gly Ser
 100 105 110
 Ser Trp Ala Pro Arg Pro Gly Arg Arg Thr Glu Glu Arg Arg Lys Gly
 115 120 125
 Ala Gly Gly Thr Arg Pro Arg Pro Ala Ala Ala Met Asn Ser Asn Val
 130 135 140
 Glu Asn Leu Pro Pro His Ile Ile Arg Leu Val Tyr Lys Glu Val Thr
 145 150 155 160
 Thr Leu Thr Ala Asp Pro Pro Asp Gly Ile Lys Val Phe Pro Asn Glu
 165 170 175
 Glu Asp Leu Thr Asp Leu Gln Val Thr Ile Glu Gly Pro Glu Gly Thr
 180 185 190
 Pro Tyr Ala Gly Gly Leu Phe Arg Met Lys Leu Leu Leu Gly Lys Asp
 195 200 205
 Phe Pro Ala Ser Pro Pro Lys Gly Tyr Phe Leu Thr Lys Ile Phe His
 210 215 220
 Pro Asn Val Gly Ala Asn Gly Glu Ile Cys Val Asn Val Leu Lys Arg
 225 230 235 240

296

Asp Trp Thr Ala Glu Leu Gly Ile Arg His Val Leu Leu Leu Ser Trp
 245 250 255

Lys Asp Lys Gln Cys Gln Thr Gln Asp Thr Gln Val Leu Leu Arg Ser
 260 265 270

Ala Gln Glu His Leu Thr Met Gln Arg Val Thr Ile Lys Cys Leu Leu
 275 280 285

Ile His Pro Asn Pro Glu Ser Ala Leu Asn Glu Glu Ala Gly Arg Leu
 290 295 300

Leu Leu Glu Asn Tyr Glu Glu Tyr Ala Ala Arg Ala Arg Leu Leu Thr
 305 310 315 320

Glu Ile His Gly Gly Ala Gly Gly Pro Ser Gly Arg Ala Glu Ala Gly
 325 330 335

Arg Ala Leu Ala Ser Gly Thr Glu Ala Ser Ser Thr Asp Pro Gly Ala
 340 345 350

Pro Gly Gly Pro Gly Gly Ala Glu Gly Pro Met Ala Lys Lys His Ala
 355 360 365

Gly Glu Arg Asp Lys Lys Leu Ala Ala Lys Lys Lys Thr Asp Lys Lys
 370 375 380

Arg Ala Leu Arg Arg Leu
 385 390

<210> 222

<211> 110

<212> PRT

<213> Homo sapien

<400> 222

Pro Gly Ala His Pro Ser Leu Asp Leu Thr Arg Cys Ser Leu Phe Leu
 1 5 10 15

Pro Lys Arg Ala Arg Ser Ala Ile Thr Lys Ile Ser Leu Val Leu Tyr
 20 25 30

Phe Leu Thr Arg Arg Arg Arg Thr Gly Trp Arg Cys Ser Pro Ala Ala
 35 40 45

Trp Arg Cys Gln Arg Ser Glu Gly Leu Gln Glu Gly Leu Lys Leu Pro
 50 55 60

297

Ala Gln Asn Leu Arg Met Glu Pro Ala Leu His Tyr Leu Arg Ser Gln
65 70 75 80

Gly Leu Gly Arg Trp Arg Lys Val Ile Ser Pro Ser Leu Lys Ser Tyr
85 90 95

Phe Leu Asn Val Ala Pro His Gln Ala Leu Tyr Leu Thr Ser
100 105 110

<210> 223
<211> 257
<212> PRT
<213> Homo sapien

<400> 223

Met Asp His Arg Ser Arg Leu Arg Gly Thr Gly Leu Asn Arg Ile Pro
1 5 10 15

Gly Thr Gln Ser Arg Ala Pro Arg Val Pro Leu Pro Phe His Val Gln
20 25 30

Gln Glu Ala Arg Glu Gly Glu Asp Trp Glu Arg Glu Pro Pro Arg Gln
35 40 45

Arg Pro Pro Ile Tyr Glu Pro Pro Glu Ser Glu Glu Leu Pro Asp Asn
50 55 60

Val Met Val Ser Lys Pro Ala Pro Tyr Trp Glu Gly Thr Ala Val Ile
65 70 75 80

Asp Gly Glu Phe Lys Glu Leu Lys Leu Thr Asp Tyr Arg Gly Lys Tyr
85 90 95

Leu Val Phe Phe Phe Tyr Pro Leu Asp Phe Thr Phe Val Cys Pro Thr
100 105 110

Glu Ile Ile Ala Phe Gly Asp Arg Leu Glu Glu Phe Arg Ser Ile Asn
115 120 125

Thr Glu Val Val Ala Cys Ser Val Asp Ser Gln Phe Thr His Leu Ala
130 135 140

Trp Ile Asn Thr Pro Arg Arg Gln Gly Gly Leu Gly Pro Ile Arg Ile
145 150 155 160

298

Pro Leu Leu Ser Asp Leu Thr His Gln Ile Ser Lys Asp Tyr Gly Val
 165 170 175

Tyr Leu Glu Asp Ser Gly His Thr Leu Arg Gly Leu Phe Ile Ile Asp
 180 185 190

Asp Lys Gly Ile Leu Arg Gln Ile Thr Leu Asn Asp Leu Pro Val Gly
 195 200 205

Arg Ser Val Asp Glu Thr Leu Arg Leu Val Gln Ala Phe Gln Tyr Thr
 210 215 220

Asp Lys His Gly Glu Val Cys Pro Ala Gly Trp Lys Pro Gly Ser Glu
 225 230 235 240

Thr Ile Ile Pro Asp Pro Ala Gly Lys Leu Lys Tyr Phe Asp Lys Leu
 245 250 255

Asn

<210> 224

<211> 105

<212> PRT

<213> Homo sapien

<400> 224

Met Gln Lys Lys Lys Asn Ser Asn Ser Asn Ser Gly Thr Ser Ser Phe
 1 5 10 15

Gly Lys Arg Arg Asn Lys Thr His Thr Leu Cys Arg Arg Cys Gly Ser
 20 25 30

Lys Ala Tyr His Leu Gln Lys Ser Thr Cys Gly Lys Cys Gly Tyr Pro
 35 40 45

Ala Lys Arg Lys Arg Lys Tyr Asn Trp Ser Ala Lys Ala Lys Arg Arg
 50 55 60

Asn Thr Thr Gly Thr Gly Arg Met Arg His Leu Lys Ile Val Tyr Arg
 65 70 75 80

Arg Phe Arg His Gly Phe Arg Glu Gly Thr Thr Pro Lys Pro Lys Arg
 85 90 95

Ala Ala Val Ala Ala Ser Ser Ser Ser
 100 105

299

<210> 225
 <211> 111
 <212> PRT
 <213> Homo sapien

<400> 225

Ile Phe Met Val Gly Val Asp Ala Lys Lys Lys Glu Phe Glu Phe Glu
 1 5 10 15

Phe Gly Thr Ser Ser Phe Gly Lys Arg Arg Asn Lys Thr His Thr Leu
 20 25 30

Cys Arg Arg Cys Gly Ser Lys Ala Tyr His Leu Gln Lys Ser Thr Cys
 35 40 45

Gly Lys Cys Gly Tyr Pro Ala Lys Arg Lys Arg Lys Tyr Asn Trp Ser
 50 55 60

Ala Lys Ala Lys Arg Arg Asn Thr Thr Gly Thr Gly Arg Met Arg His
 65 70 75 80

Leu Lys Ile Val Tyr Arg Arg Phe Arg His Gly Phe Arg Glu Gly Thr
 85 90 95

Thr Pro Lys Pro Lys Arg Ala Ala Val Ala Ala Ser Ser Ser Ser
 100 105 110

<210> 226
 <211> 104
 <212> PRT
 <213> Homo sapien

<220>
 <221> MISC_FEATURE
 <222> (3)..(5)
 <223> X=any amino acid

<400> 226

Met Ser Xaa Xaa Xaa Arg Ile Arg Pro Arg Gly Thr Ser Ser Phe Gly
 1 5 10 15

Lys Arg Arg Asn Lys Thr His Thr Leu Cys Arg Arg Cys Gly Ser Lys
 20 25 30

Ala Tyr His Leu Gln Lys Ser Thr Cys Gly Lys Cys Gly Tyr Pro Ala
 35 40 45

300

Lys Arg Lys Arg Lys Tyr Asn Trp Ser Ala Lys Ala Lys Arg Arg Asn
 50 55 60

Thr Thr Gly Thr Gly Arg Met Arg His Leu Lys Ile Val Tyr Arg Arg
 65 70 75 80

Phe Arg His Gly Phe Arg Glu Gly Thr Thr Pro Lys Pro Lys Arg Ala
 85 90 95

Ala Val Ala Ala Ser Ser Ser Ser
 100

<210> 227
 <211> 129
 <212> PRT
 <213> Homo sapien

<220>
 <221> MISC_FEATURE
 <222> (12)..(12)
 <223> X=any amino acid

<220>
 <221> MISC_FEATURE
 <222> (25)..(25)
 <223> X=any amino acid

<220>
 <221> MISC_FEATURE
 <222> (62)..(62)
 <223> X=any amino acid

<220>
 <221> MISC_FEATURE
 <222> (64)..(64)
 <223> X=any amino acid

<400> 227

Gln Ser His Lys Thr Leu Val Leu Gln Thr Thr Xaa Arg Ser Leu Leu
 1 5 10 15

Ala His Thr Thr Cys Arg Phe Trp Xaa Phe Pro Asn Leu Leu Gly Ile
 20 25 30

Lys Val Asn Asn Ser Ile Thr Arg Gly Ser Gly Gln Pro Ser Phe Val
 35 40 45

Arg Gly Cys Ile Val Gly Lys Pro Thr Ser Val Cys Gln Xaa Leu Xaa

301

50

55

60

Glu Phe Gly Arg Gly Glu Arg His Arg Leu Glu Ser Val Ala Ile Arg
 65 70 75 80

Arg Thr Arg Cys Ala Ala Ala Val Ala Leu Arg Pro Thr Thr Phe Arg
 85 90 95

Ser Arg Pro Val Ala Asn Val Ala Thr Leu Pro Ser Ala Arg Glu Ser
 100 105 110

Ile Thr Gly Val Pro Arg Leu Lys Asp Glu Ile Pro Pro Glu Leu Val
 115 120 125

Glu

<210> 228

<211> 96

<212> PRT

<213> Homo sapien

<400> 228

Ala Cys Arg Ala Ala Gln Cys Asp Gly Ser Trp Ser Arg Pro Arg Ser
 1 5 10 15

Leu Cys Arg Arg Cys Gly Ser Lys Ala Tyr His Leu Gln Lys Ser Thr
 20 25 30

Cys Gly Lys Cys Gly Tyr Pro Ala Lys Arg Lys Arg Lys Tyr Asn Trp
 35 40 45

Ser Ala Lys Ala Lys Arg Arg Asn Thr Thr Gly Thr Gly Arg Met Arg
 50 55 60

His Leu Lys Ile Val Tyr Arg Arg Phe Arg His Gly Phe Arg Glu Gly
 65 70 75 80

Thr Thr Pro Lys Pro Lys Arg Ala Ala Val Ala Ala Ser Ser Ser Ser
 85 90 95

<210> 229

<211> 55

<212> PRT

<213> Homo sapien

<400> 229

302

Met His Ala Glu Arg Arg Ser Val Met Asp Arg Gly Arg Gly Arg Gly
 1 5 10 15

Arg Pro Thr Thr Phe Arg Ser Arg Pro Val Ala Asn Val Ala Thr Leu
 20 25 30

Pro Ser Ala Arg Glu Ser Ile Thr Gly Val Pro Arg Leu Lys Asp Glu
 35 40 45

Ile Pro Pro Glu Leu Val Glu
 50 55

<210> 230
 <211> 72
 <212> PRT
 <213> Homo sapien

<400> 230

Ala Tyr His Leu Gln Lys Ser Thr Cys Gly Lys Cys Gly Tyr Pro Ala
 1 5 10 15

Lys Arg Lys Arg Lys Tyr Asn Trp Ser Ala Lys Ala Lys Arg Arg Asn
 20 25 30

Thr Thr Gly Thr Gly Arg Met Arg His Leu Lys Ile Val Tyr Arg Arg
 35 40 45

Phe Arg His Gly Phe Arg Glu Gly Thr Thr Pro Lys Pro Lys Arg Ala
 50 55 60

Ala Val Ala Ala Ser Ser Ser Ser
 65 70

<210> 231
 <211> 185
 <212> PRT
 <213> Homo sapien

<400> 231

Met Leu Glu Arg Arg Ser Val Asp Gly Cys Ala Arg Ala Gly Gly Arg
 1 5 10 15

Ala Gly Gly Ala Ile Met Gly Val Asp Ile Arg His Asn Lys Asp Arg
 20 25 30

Lys Val Arg Arg Lys Glu Pro Lys Ser Gln Asp Ile Tyr Leu Arg Leu
 35 40 45

303

Leu Val Lys Leu Tyr Arg Phe Leu Ala Arg Arg Thr Asn Ser Thr Phe
 50 55 60

Asn Gln Val Val Leu Lys Arg Leu Phe Met Ser Arg Thr Asn Arg Pro
 65 70 75 80

Pro Leu Ser Leu Ser Arg Met Ile Arg Lys Met Lys Leu Pro Gly Arg
 85 90 95

Glu Asn Lys Thr Ala Val Val Val Gly Thr Ile Thr Asp Asp Val Arg
 100 105 110

Val Gln Glu Val Pro Lys Leu Lys Val Cys Ala Leu Arg Val Thr Ser
 115 120 125

Arg Ala Arg Ser Arg Ile Leu Arg Ala Gly Gly Lys Ile Leu Thr Phe
 130 135 140

Asp Gln Leu Ala Leu Asp Ser Pro Lys Gly Cys Gly Thr Val Leu Leu
 145 150 155 160

Ser Gly Pro Arg Lys Gly Arg Glu Val Tyr Arg His Phe Gly Lys Ala
 165 170 175

Pro Gly Thr Pro His Ser His Thr Lys
 180 185

<210> 232
 <211> 214
 <212> PRT
 <213> Homo sapien

<400> 232

Gly Leu Trp His Cys Pro Ala Leu Arg Ser Ser Gln Gly Pro Arg Gly
 1 5 10 15

Val Pro Ala Phe Arg Gln Gly Pro Arg Asn Pro Ala Gln Pro His Gln
 20 25 30

Val Ser Ile Arg Pro Pro Ala Leu Pro Ser Pro Gln Thr Gln Pro Ala
 35 40 45

Gly Pro Gly Leu Ala Thr Leu Gly Leu Leu Leu Leu Ser Leu Val Pro
 50 55 60

Ala Ser Pro Arg Pro Ser Gly Thr Leu Ser Cys Leu Ile Leu Pro Ala

65 70 75 80

Phe Pro Phe Asn Thr Ala Trp Ser Cys Val Phe Gln Gly Leu Ser Arg
85 90 95

His Leu Leu Gly Ser Met Gln Phe Thr Gly Leu Cys Gln Pro Arg Leu
100 105 110

Gly Pro Ser Arg Trp Trp Gly Arg Cys Phe His Ser Pro Ser Trp Leu
115 120 125

Leu Gly Phe Pro Leu Cys Gln Ala Phe Pro Ala Ala Leu Thr Leu Leu
130 135 140

Gly Leu Asn Val Thr Gly Leu Trp Cys Ser Cys Ala Thr Pro Gln Trp
145 150 155 160

Pro Pro Leu Arg Gly Pro Pro Ser His Ser Leu Leu Ser Pro Gln Thr
165 170 175

Leu Arg Pro Leu Gln Gly Pro Glu Val Arg Ala Cys Gln Arg Pro Thr
180 185 190

Gly Gln Pro Arg Leu Gln Lys Leu Thr Leu Asp Pro Thr Leu Leu Leu
195 200 205

Lys Arg Phe Leu Leu Thr
210

<210> 233
<211> 131
<212> PRT
<213> Homo sapien

<400> 233

Met Leu Glu Arg Arg Ser Val Asp Gly Cys Ala Arg Ala Gly Gly Arg
1 5 10 15

Ala Gly Gly Ala Ile Met Gly Val Asp Ile Arg His Asn Lys Asp Arg
20 25 30

Lys Val Arg Arg Lys Glu Pro Lys Ser Gln Asp Ile Tyr Leu Arg Leu
35 40 45

Leu Val Lys Leu Tyr Arg Phe Leu Ala Arg Arg Thr Asn Ser Thr Phe
50 55 60

305

Asn Gln Val Val Leu Lys Arg Leu Phe Met Ser Arg Thr Asn Arg Pro
 65 70 75 80

Pro Leu Ser Leu Ser Arg Met Ile Arg Lys Met Lys Leu Pro Gly Arg
 85 90 95

Glu Asn Lys Thr Ala Val Val Val Gly Thr Ile Thr Asp Asp Val Arg
 100 105 110

Val Gln Glu Val Pro Lys Leu Ile Gly Arg Asp His Ala Lys Pro Asp
 115 120 125

Ser Ser Thr
 130

<210> 234
 <211> 132
 <212> PRT
 <213> Homo sapien

<400> 234

Asp Ala Cys Ser Ser Gly Ala Gly Asp Gly Cys Ala Arg Ala Gly Gly
 1 5 10 15

Arg Ala Gly Gly Ala Ile Met Gly Val Asp Ile Arg His Asn Lys Asp
 20 25 30

Arg Lys Val Arg Arg Lys Glu Pro Lys Ser Gln Asp Ile Tyr Leu Arg
 35 40 45

Leu Leu Val Lys Leu Tyr Arg Phe Leu Ala Arg Arg Thr Asn Ser Thr
 50 55 60

Phe Asn Gln Val Val Leu Lys Arg Leu Phe Met Ser Arg Thr Asn Arg
 65 70 75 80

Pro Pro Leu Ser Leu Ser Arg Met Ile Arg Lys Met Lys Leu Pro Gly
 85 90 95

Arg Glu Asn Lys Thr Ala Val Val Val Gly Thr Ile Thr Asp Asp Val
 100 105 110

Arg Val Gln Glu Val Pro Lys Leu Ile Gly Arg Asp His Ala Lys Pro
 115 120 125

Asp Ser Ser Thr

306

130

<210> 235

<211> 195

<212> PRT

<213> Homo sapien

<400> 235

Met Asp Trp Ser Arg Arg Gly Gly Arg Ala Gly Gly Ala Ile Met Gly
 1 5 10 15

Val Asp Ile Arg His Asn Lys Asp Arg Lys Val Arg Arg Lys Glu Pro
 20 25 30

Lys Ser Gln Asp Ile Tyr Leu Arg Leu Leu Val Lys Leu Tyr Arg Phe
 35 40 45

Leu Ala Arg Arg Thr Asn Ser Thr Phe Asn Gln Val Val Leu Lys Arg
 50 55 60

Leu Phe Met Ser Arg Thr Asn Arg Pro Pro Leu Ser Leu Ser Arg Met
 65 70 75 80

Val Ser Gly Trp Ser Arg Glu His Gly Arg Pro Gly Ser Arg Trp Val
 85 90 95

Leu Ser Val Trp Lys Gly Gly Arg Thr Trp Ser Ser Gly Ser Asn Gln
 100 105 110

Gly Ile Lys Gly Leu Ser Gln Pro Val Ala Ser Val Glu Leu Gly Leu
 115 120 125

Leu Val Gly Thr Glu Cys Pro Trp Ala Val Gly Lys Ser Pro Gly Pro
 130 135 140

Pro Leu Leu Leu Phe Val Arg Trp Arg Cys Pro Gly Gly Phe Arg Arg
 145 150 155 160

Leu Pro Gln Val Ile Thr Glu Phe Tyr Val Lys Gly Ser Ala Glu Gly
 165 170 175

Gly Pro Ile Glu Gln Ser Ala Phe Phe Phe Leu Ser Gly Ala Phe Pro
 180 185 190

Ser Trp Thr
 195

307

<210> 236
 <211> 115
 <212> PRT
 <213> Homo sapien

<400> 236

Ser Ala Trp Thr Leu Thr Ser Asn Gly Arg Ser Phe Pro Gly Pro Phe
 1 5 10 15

Pro Lys Ser Trp Ala Cys Phe Leu Leu Pro Leu Ala Ile Leu Cys Pro
 20 25 30

Cys Gly Cys Ser Pro Thr Leu Arg Ala Val Pro Asp Leu Ser Cys Tyr
 35 40 45

Phe Pro Lys Pro Glu Thr Ala Pro Leu Gln Ile Leu Ala Ala Pro Phe
 50 55 60

Pro Cys Val Gln Tyr Arg Val Ile Thr Cys Pro Ser Leu Val Pro Leu
 65 70 75 80

Ile Leu Pro Cys Asp Tyr Ser Val Ile Pro Leu Pro Val Pro Glu Pro
 85 90 95

Pro Gly Leu Phe Leu Gly Ser Pro Glu Cys Ser Pro Arg Thr Gln Ser
 100 105 110

Ala Val Pro
 115

<210> 237
 <211> 156
 <212> PRT
 <213> Homo sapien

<400> 237

Gln Ser Leu Gly Arg Gly Leu Ala Thr Thr Arg Gly Arg Gly Ser Asp
 1 5 10 15

Gly Asn Gly Pro Thr Gly Asn Gly Asp His Pro Asn Phe Ser Leu Ser
 20 25 30

Glu Gly Arg Ala Phe Gly Ser Leu Ala Ala Gln Pro Ile Thr Ser Cys
 35 40 45

Leu Ser Val Pro Ala Pro Pro Phe Ser Leu Gly Lys Leu Gln Asp Gly
 50 55 60

308

Leu Leu His Ile Thr Thr Cys Ser Phe Val Ala Pro Trp Asn Ser Leu
65 70 75 80

Ser Leu Ala Gln Arg Arg Gly Phe Thr Lys Thr Tyr Thr Val Gly Cys
85 90 95

Glu Glu Cys Thr Val Phe Pro Cys Leu Ser Ile Pro Cys Lys Leu Gln
100 105 110

Ser Gly Thr His Cys Leu Trp Thr Asp Gln Leu Leu Gln Gly Ser Glu
115 120 125

Lys Gly Phe Gln Ser Arg His Leu Ala Cys Leu Pro Arg Glu Pro Gly
130 135 140

Leu Cys Thr Trp Gln Ser Leu Arg Ser Gln Ile Ala
145 150 155

<210> 238
<211> 226
<212> PRT
<213> Homo sapien

<400> 238

Met Ala Ala Ala Ala Ala Ala Ala Gly Ala Ala Gly Ser Ala Ala Pro
1 5 10 15

Ala Ala Ala Ala Gly Ala Pro Gly Ser Gly Gly Ala Pro Ser Gly Ser
20 25 30

Gln Gly Val Leu Ile Gly Asp Arg Leu Tyr Ser Gly Val Leu Ile Thr
35 40 45

Leu Glu Asn Cys Leu Leu Pro Asp Asp Lys Leu Arg Phe Thr Pro Ser
50 55 60

Met Ser Ser Gly Leu Asp Thr Asp Thr Glu Thr Asp Leu Arg Val Val
65 70 75 80

Gly Cys Glu Leu Ile Gln Ala Ala Gly Ile Leu Leu Arg Leu Pro Gln
85 90 95

Val Ala Met Ala Thr Gly Gln Val Leu Phe Gln Arg Phe Phe Tyr Thr
100 105 110

309

Lys Ser Phe Val Lys His Ser Met Glu His Val Ser Met Ala Cys Val
 115 120 125

His Leu Ala Ser Lys Ile Glu Glu Ala Pro Arg Arg Ile Arg Asp Val
 130 135 140

Ile Asn Val Phe His Arg Leu Arg Gln Leu Arg Asp Lys Lys Lys Pro
 145 150 155 160

Val Pro Leu Leu Leu Asp Gln Asp Tyr Val Asn Leu Lys Asn Gln Ile
 165 170 175

Ile Lys Ala Glu Arg Arg Val Leu Lys Glu Leu Gly Phe Cys Val His
 180 185 190

Val Lys His Pro His Lys Ile Ile Val Met Tyr Leu Gln Val Leu Glu
 195 200 205

Cys Glu Arg Asn Gln His Leu Val Gln Thr Ser Trp Val Ala Ser Glu
 210 215 220

Gly Lys
 225

<210> 239
 <211> 253
 <212> PRT
 <213> Homo sapien

<400> 239

Asp Ser Gln Asp Cys Leu Ala Leu Ser Pro Ser Asn Arg Leu Leu Arg
 1 5 10 15

Gly Val Val Arg Leu Ser Arg Phe Ser Leu Asp Asn Ala Gly Gly Arg
 20 25 30

Pro Gly Phe Pro Gly Gly Ala Leu Gln Phe Phe Leu Cys Leu Ala Ser
 35 40 45

Arg Asn Tyr Met Asn Asp Ser Leu Arg Thr Asp Val Phe Val Arg Phe
 50 55 60

Gln Pro Glu Ser Ile Ala Cys Ala Cys Ile Tyr Leu Ala Ala Arg Thr
 65 70 75 80

Leu Glu Ile Pro Leu Pro Asn Arg Pro His Trp Phe Leu Leu Phe Gly
 85 90 95

310

Ala Thr Glu Glu Glu Ile Gln Glu Ile Cys Leu Lys Ile Leu Gln Leu
 100 105 110

Tyr Ala Arg Lys Lys Val Asp Leu Thr His Leu Glu Gly Glu Val Glu
 115 120 125

Lys Arg Lys His Ala Ile Glu Glu Ala Lys Ala Gln Ala Arg Gly Leu
 130 135 140

Leu Pro Gly Gly Thr Gln Val Leu Asp Gly Thr Ser Gly Phe Ser Pro
 145 150 155 160

Ala Pro Lys Leu Val Glu Ser Pro Lys Glu Gly Lys Gly Ser Lys Pro
 165 170 175

Ser Pro Leu Ser Val Lys Asn Thr Lys Arg Arg Leu Glu Gly Ala Lys
 180 185 190

Lys Ala Lys Ala Asp Ser Pro Val Asn Gly Leu Pro Lys Gly Arg Glu
 195 200 205

Ser Arg Ser Arg Ser Arg Ser Arg Glu Gln Ser Tyr Ser Arg Ser Pro
 210 215 220

Ser Arg Ser Ala Ser Pro Lys Arg Arg Lys Ser Asp Ser Gly Ser Thr
 225 230 235 240

Ser Gly Gly Ser Lys Ser Gln Arg Ser Leu Gln Arg Leu
 245 250

<210> 240

<211> 346

<212> PRT

<213> Homo sapien

<400> 240

Asp Ser Gln Asp Cys Leu Ala Leu Ser Pro Ser Asn Arg Leu Leu Arg
 1 5 10 15

Gly Val Val Arg Leu Ser Arg Phe Ser Leu Asp Asn Ala Gly Gly Arg
 20 25 30

Pro Gly Phe Pro Gly Gly Ala Leu Gln Phe Phe Leu Cys Leu Ala Ser
 35 40 45

311

Arg Asn Tyr Met Asn Asp Ser Leu Arg Thr Asp Val Phe Val Arg Phe
 50 55 60

Gln Pro Glu Ser Ile Ala Cys Ala Cys Ile Tyr Leu Ala Ala Arg Thr
 65 70 75 80

Leu Glu Ile Pro Leu Pro Asn Arg Pro His Trp Phe Leu Leu Phe Gly
 85 90 95

Ala Thr Glu Glu Glu Ile Gln Glu Ile Cys Leu Lys Ile Leu Gln Leu
 100 105 110

Tyr Ala Arg Lys Lys Val Asp Leu Thr His Leu Glu Gly Glu Val Glu
 115 120 125

Lys Arg Lys His Ala Ile Glu Glu Ala Lys Ala Gln Ala Arg Gly Leu
 130 135 140

Leu Pro Gly Gly Thr Gln Val Leu Asp Gly Thr Ser Gly Phe Ser Pro
 145 150 155 160

Ala Pro Lys Leu Val Glu Ser Pro Lys Glu Gly Lys Gly Ser Lys Pro
 165 170 175

Ser Pro Leu Ser Val Lys Asn Thr Lys Arg Arg Leu Glu Gly Ala Lys
 180 185 190

Lys Ala Lys Ala Asp Ser Pro Val Asn Gly Leu Pro Lys Gly Arg Glu
 195 200 205

Ser Arg Ser Arg Ser Arg Ser Arg Glu Gln Ser Tyr Ser Arg Ser Pro
 210 215 220

Ser Arg Ser Ala Ser Pro Lys Arg Arg Lys Ser Asp Ser Gly Ser Thr
 225 230 235 240

Ser Gly Gly Ser Lys Ser Gln Ser Arg Ser Arg Ser Arg Ser Asp Ser
 245 250 255

Pro Pro Arg Gln Ala Pro Arg Ser Ala Pro Tyr Lys Gly Ser Glu Ile
 260 265 270

Arg Gly Ser Arg Lys Ser Lys Asp Cys Lys Tyr Pro Gln Lys Pro His
 275 280 285

Lys Ser Arg Ser Arg Ser Ser Ser Arg Ser Arg Ser Arg Glu

312

290

295

300

Arg Ala Asp Asn Pro Gly Lys Tyr Lys Lys Lys Ser His Tyr Tyr Arg
 305 310 315 320

Asp Gln Arg Arg Glu Arg Ser Arg Ser Tyr Glu Arg Thr Gly Arg Arg
 325 330 335

Tyr Glu Arg Asp His Pro Val Ala Ala Leu
 340 345

<210> 241
 <211> 91
 <212> PRT
 <213> Homo sapien

<400> 241

Pro Thr Thr Thr Lys Phe Ala Ala Ala Ser Thr Phe Leu Asn Trp Cys
 1 5 10 15

Cys Leu Gly Phe Ile Ala Phe Ala Tyr Ser Val Lys Ser Arg Asp Arg
 20 25 30

Lys Met Val Gly Asp Val Thr Gly Ala Gln Ala Tyr Ala Ser Thr Ala
 35 40 45

Lys Cys Leu Asn Ile Trp Ala Leu Ile Leu Gly Ile Phe Met Thr Ile
 50 55 60

Gly Phe Ile Leu Leu Leu Val Phe Gly Ser Val Thr Val Tyr His Ile
 65 70 75 80

Met Leu Gln Ile Ile Gln Glu Lys Arg Gly Tyr
 85 90

<210> 242
 <211> 92
 <212> PRT
 <213> Homo sapien

<400> 242

Gly Gln Glu Asp Gly Trp Arg Arg Asp Arg Gly Pro Gly Leu Cys Leu
 1 5 10 15

His Arg Gln Val Pro Glu His Leu Gly Pro Asp Phe Gly His Leu His
 20 25 30

313

Asp Arg Ile His Pro Val Thr Gly Ile Arg Leu Cys Asp Ser Leu Pro
 35 40 45

Tyr Tyr Val Thr Asp Asn Thr Gly Lys Thr Gly Leu Leu Val Ala Ala
 50 55 60

His Ser Leu Gln Pro Leu His Ser Thr Val Gln Cys Trp Pro Cys Thr
 65 70 75 80

Leu Gly Leu Leu Pro Leu Pro Pro Trp Ser Cys Pro
 85 90

<210> 243

<211> 137

<212> PRT

<213> Homo sapien

<400> 243

Met Leu Glu Arg Arg Ser Val Met Asp Arg Pro Pro Ala Glu Val Arg
 1 5 10 15

Glu Thr Lys Ile Lys Gly Lys Ser Gly Arg Phe Phe Thr Val Lys Leu
 20 25 30

Pro Val Ala Leu Asp Pro Gly Ala Lys Ile Ser Val Ile Val Glu Thr
 35 40 45

Val Tyr Thr His Val Leu His Pro Tyr Pro Thr Gln Ile Thr Gln Ser
 50 55 60

Glu Lys Gln Phe Val Val Phe Glu Gly Asn His Tyr Phe Tyr Ser Pro
 65 70 75 80

Tyr Pro Thr Lys Thr Gln Thr Met Arg Val Lys Leu Ala Ser Arg Asn
 85 90 95

Val Glu Ser Tyr Thr Lys Leu Gly Asn Pro Thr Arg Ser Glu Asp Leu
 100 105 110

Leu Asp Tyr Gly Pro Phe Arg Asp Val Pro Ala Tyr Ser Gln Asp Thr
 115 120 125

Phe Lys Val Pro Arg Pro Arg Pro Arg
 130 135

<210> 244

<211> 148

314

<212> PRT
 <213> Homo sapien

 <220>
 <221> MISC_FEATURE
 <222> (21)..(22)
 <223> X=any amino acid

<220>
 <221> MISC_FEATURE
 <222> (24)..(24)
 <223> X=any amino acid

<400> 244

Arg Leu Ile Tyr Arg Ala Ile Gly His Leu Ile Met Leu Glu Arg Arg
 1 5 10 15

Ser Val Met Asp Xaa Xaa Pro Xaa Glu Val Arg Glu Thr Lys Ile Lys
 20 25 30

Gly Lys Ser Gly Arg Phe Phe Thr Val Lys Leu Pro Val Ala Leu Asp
 35 40 45

Pro Gly Ala Lys Ile Ser Val Ile Val Glu Thr Val Tyr Thr His Val
 50 55 60

Leu His Pro Tyr Pro Thr Gln Ile Thr Gln Ser Glu Lys Gln Phe Val
 65 70 75 80

Val Phe Glu Gly Asn His Tyr Phe Tyr Ser Pro Tyr Pro Thr Lys Thr
 85 90 95

Gln Thr Met Arg Val Lys Leu Ala Ser Arg Asn Val Glu Ser Tyr Thr
 100 105 110

Lys Leu Gly Asn Pro Thr Arg Ser Glu Asp Leu Leu Asp Tyr Gly Pro
 115 120 125

Phe Arg Asp Val Pro Ala Tyr Ser Gln Asp Thr Phe Lys Val Pro Arg
 130 135 140

Pro Arg Pro Arg
 145

<210> 245
 <211> 479
 <212> PRT
 <213> Homo sapien

315

<400> 245

Met Glu Ala Pro Ala Ala Gly Leu Phe Leu Leu Leu Leu Leu Gly Thr
 1 5 10 15

Trp Ala Pro Ala Pro Gly Ser Ala Ser Ser Glu Ala Pro Pro Leu Ile
 20 25 30

Asn Glu Asp Val Lys Arg Thr Val Asp Leu Ser Ser His Leu Ala Lys
 35 40 45

Val Thr Ala Glu Val Val Leu Ala His Leu Gly Gly Gly Ser Thr Ser
 50 55 60

Arg Ala Thr Ser Phe Leu Leu Ala Leu Glu Pro Glu Leu Glu Ala Arg
 65 70 75 80

Leu Ala His Leu Gly Val Gln Val Lys Gly Glu Asp Glu Glu Glu Asn
 85 90 95

Asn Leu Glu Val Arg Glu Thr Lys Ile Lys Gly Lys Ser Gly Arg Phe
 100 105 110

Phe Thr Val Lys Leu Pro Val Ala Leu Asp Pro Gly Ala Lys Ile Ser
 115 120 125

Val Ile Val Glu Thr Val Tyr Thr His Val Leu His Pro Tyr Pro Thr
 130 135 140

Gln Ile Thr Gln Ser Glu Lys Gln Phe Val Val Phe Glu Gly Asn His
 145 150 155 160

Tyr Phe Tyr Ser Pro Tyr Pro Thr Lys Thr Gln Thr Met Arg Val Lys
 165 170 175

Leu Ala Ser Arg Asn Val Glu Ser Tyr Thr Lys Leu Gly Asn Pro Thr
 180 185 190

Arg Ser Glu Asp Leu Leu Asp Tyr Gly Pro Phe Arg Asp Val Pro Ala
 195 200 205

Tyr Ser Gln Asp Thr Phe Lys Val His Tyr Glu Asn Asn Ser Pro Phe
 210 215 220

Leu Thr Ile Thr Ser Met Thr Arg Val Ile Glu Val Ser His Trp Gly
 225 230 235 240

316

Asn Ile Ala Val Glu Glu Asn Val Asp Leu Lys His Thr Gly Ala Val
 245 250 255

Leu Lys Gly Pro Phe Ser Arg Tyr Asp Tyr Gln Arg Gln Pro Asp Ser
 260 265 270

Gly Ile Ser Ser Ile Arg Ser Phe Lys Thr Ile Leu Pro Ala Ala Ala
 275 280 285

Gln Asp Val Tyr Tyr Arg Asp Glu Ile Gly Asn Val Ser Thr Ser His
 290 295 300

Leu Leu Ile Leu Asp Asp Ser Val Glu Met Glu Ile Arg Pro Arg Phe
 305 310 315 320

Pro Leu Phe Gly Gly Trp Lys Thr His Tyr Ile Val Gly Tyr Asn Leu
 325 330 335

Pro Ser Tyr Glu Tyr Leu Tyr Asn Leu Gly Asp Gln Tyr Ala Leu Lys
 340 345 350

Met Arg Phe Val Asp His Val Phe Asp Glu Gln Val Ile Asp Ser Leu
 355 360 365

Thr Val Lys Ile Ile Leu Pro Glu Gly Ala Lys Asn Ile Glu Ile Asp
 370 375 380

Ser Pro Tyr Glu Ile Ser Arg Ala Pro Asp Glu Leu His Tyr Thr Tyr
 385 390 395 400

Leu Asp Thr Phe Gly Arg Pro Val Ile Val Ala Tyr Lys Lys Asn Leu
 405 410 415

Val Glu Gln His Ile Gln Asp Ile Val Leu Asp Ala Gln Val Lys Glu
 420 425 430

Leu Val Leu Lys Ser Ala Val Glu Ala Glu Arg Leu Val Ala Gly Lys
 435 440 445

Leu Lys Lys Asp Thr Tyr Ile Glu Asn Glu Lys Leu Ile Ser Gly Lys
 450 455 460

Arg Gln Glu Leu Val Thr Lys Ile Asp His Ile Leu Asp Ala Leu
 465 470 475

317

<210> 246

<211> 361

<212> PRT

<213> Homo sapien

<400> 246

Met Glu Ala Pro Ala Ala Gly Leu Phe Leu Leu Leu Leu Leu Gly Thr
 1 5 10 15

Trp Ala Pro Ala Pro Gly Ser Ala Ser Ser Glu Ala Pro Pro Leu Ile
 20 25 30

Asn Glu Asp Val Lys Arg Thr Val Asp Leu Ser Ser His Leu Ala Lys
 35 40 45

Val Thr Ala Glu Val Val Leu Ala His Leu Gly Gly Gly Ser Thr Ser
 50 55 60

Arg Ala Thr Ser Phe Leu Leu Ala Leu Glu Pro Glu Leu Glu Ala Arg
 65 70 75 80

Leu Ala His Leu Gly Val Gln Val Lys Gly Glu Asp Glu Glu Glu Asn
 85 90 95

Asn Leu Glu Val Arg Glu Thr Lys Ile Lys Gly Lys Ser Gly Arg Phe
 100 105 110

Phe Thr Val Lys Leu Pro Val Ala Leu Asp Pro Gly Ala Lys Ile Ser
 115 120 125

Val Ile Val Glu Thr Val Tyr Thr His Val Leu His Pro Tyr Pro Thr
 130 135 140

Gln Ile Thr Gln Ser Glu Lys Gln Phe Val Val Phe Glu Gly Asn His
 145 150 155 160

Tyr Phe Tyr Ser Pro Tyr Pro Thr Lys Thr Gln Thr Met Arg Val Lys
 165 170 175

Leu Ala Ser Arg Asn Val Glu Ser Tyr Thr Lys Leu Gly Asn Pro Thr
 180 185 190

Arg Ser Glu Asp Leu Leu Asp Tyr Gly Pro Phe Arg Asp Val Pro Ala
 195 200 205

Tyr Ser Gln Asp Thr Phe Lys Val His Tyr Glu Asn Asn Ser Pro Phe

318

210 215 220
 Leu Thr Ile Thr Ser Met Thr Arg Val Ile Glu Val Ser His Trp Gly
 225 230 235 240
 Asn Ile Ala Val Glu Glu Asn Val Asp Leu Lys His Thr Gly Ala Val
 245 250 255
 Leu Lys Gly Pro Phe Ser Arg Tyr Asp Tyr Gln Arg Gln Pro Asp Ser
 260 265 270
 Gly Ile Ser Ser Ile Arg Ser Phe Lys Thr Ile Leu Pro Ala Ala Ala
 275 280 285
 Gln Asp Val Tyr Tyr Arg Asp Glu Ile Gly Asn Val Ser Thr Ser His
 290 295 300
 Leu Leu Ile Leu Asp Asp Ser Val Glu Met Glu Ile Arg Pro Arg Phe
 305 310 315 320
 Pro Leu Phe Gly Gly Trp Lys Thr His Tyr Ile Val Gly Tyr Asn Leu
 325 330 335
 Pro Ser Tyr Glu Tyr Leu Tyr Asn Leu Gly Gln Ser Ser Ile Val Arg
 340 345 350
 Glu Lys Leu Thr Phe Ser Leu Ile Ser
 355 360
 <210> 247
 <211> 420
 <212> PRT
 <213> Homo sapien
 <400> 247
 Met Glu Ala Pro Ala Ala Gly Leu Phe Leu Leu Leu Leu Gly Thr
 1 5 10 15
 Trp Ala Pro Ala Pro Gly Ser Ala Ser Ser Glu Ala Pro Pro Leu Ile
 20 25 30
 Asn Glu Asp Val Lys Arg Thr Val Asp Leu Ser Ser His Leu Ala Lys
 35 40 45
 Val Thr Ala Glu Val Val Leu Ala His Leu Gly Gly Gly Ser Thr Ser
 50 55 60

319

Arg Ala Thr Ser Phe Leu Leu Ala Leu Glu Pro Glu Leu Glu Ala Arg
65 70 75 80

Leu Ala His Leu Gly Val Gln Val Lys Gly Glu Asp Glu Glu Glu Asn
85 90 95

Asn Leu Glu Val Arg Glu Thr Lys Ile Lys Gly Lys Ser Gly Arg Phe
100 105 110

Phe Thr Val Lys Leu Pro Val Ala Leu Asp Pro Gly Ala Lys Ile Ser
115 120 125

Val Ile Val Glu Thr Val Tyr Thr His Val Leu His Pro Tyr Pro Thr
130 135 140

Gln Ile Thr Gln Ser Glu Lys Gln Phe Val Val Phe Glu Gly Asn His
145 150 155 160

Tyr Phe Tyr Ser Pro Tyr Pro Thr Lys Thr Gln Thr Met Arg Val Lys
165 170 175

Leu Ala Ser Arg Asn Val Glu Ser Tyr Thr Lys Leu Gly Asn Pro Thr
180 185 190

Arg Ser Glu Asp Leu Leu Asp Tyr Gly Pro Phe Arg Asp Val Pro Ala
195 200 205

Tyr Ser Gln Asp Thr Phe Lys Val His Tyr Glu Asn Asn Ser Pro Phe
210 215 220

Leu Thr Ile Thr Ser Met Thr Arg Val Ile Glu Val Ser His Trp Gly
225 230 235 240

Asn Ile Ala Val Glu Glu Asn Val Asp Leu Lys His Thr Gly Ala Val
245 250 255

Leu Lys Gly Pro Phe Ser Arg Tyr Asp Tyr Gln Arg Gln Pro Asp Ser
260 265 270

Gly Ile Ser Ser Ile Arg Ser Phe Lys Thr Ile Leu Pro Ala Ala Ala
275 280 285

Gln Asp Val Tyr Tyr Arg Asp Glu Ile Gly Asn Val Ser Thr Ser His
290 295 300

320

Leu Leu Ile Leu Asp Asp Ser Val Glu Met Glu Ile Arg Pro Arg Phe
 305 310 315 320

Pro Leu Phe Gly Gly Trp Lys Thr His Tyr Ile Val Gly Tyr Asn Leu
 325 330 335

Pro Ser Tyr Glu Tyr Leu Tyr Asn Leu Gly Asp Gln Tyr Ala Leu Lys
 340 345 350

Met Arg Phe Val Asp His Val Phe Asp Glu Gln Val Ile Asp Ser Leu
 355 360 365

Thr Val Lys Ile Ile Leu Pro Glu Gly Ala Lys Thr Thr Ser Trp Met
 370 375 380

Pro Cys Ser Pro Cys Pro His Pro Pro Gly Gly Pro Gly Cys Leu His
 385 390 395 400

Phe Ala Val Ala Gly Arg Leu Gly Gly Ser Gly Arg Leu Cys Met Glu
 405 410 415

Ala Ser Glu Ser
 420

<210> 248
 <211> 128
 <212> PRT
 <213> Homo sapien

<400> 248

Gly Cys Ala Arg Glu Pro Glu Ser Arg Leu Pro Lys Leu Gly Ser Trp
 1 5 10 15

Glu Asn Leu Gly Pro Gly Leu Thr Glu Lys Arg Arg Gly Lys Glu Ala
 20 25 30

Gly Gln Glu Glu Gly Ala Trp Arg Thr Pro Ala Gly Gly Arg Gly Ala
 35 40 45

Ala Gly Leu Ser Val Thr Pro Leu Ser Pro Pro Arg Pro Ala Pro Pro
 50 55 60

Ala Gly Glu Gly Pro Arg Cys Pro Pro Gly Arg Pro Ala Pro Ala Arg
 65 70 75 80

Arg Arg Lys Gly Trp Arg Val Glu Arg Arg Gly Gly Arg Gly Ser Ala
 85 90 95

321

Trp Asp Ala Pro Gly His Arg Ala Arg Ser Leu Arg Pro Gly Ala Gly
 100 105 110

Gln Val Arg Gly Gln Asp Val Gly Arg Thr Trp Cys Met Ala Ala Ser
 115 120 125

<210> 249
 <211> 315
 <212> PRT
 <213> Homo sapien

<400> 249

Met Ser Ala Ala Gly Ala Gly Val Glu Ala Gly Phe Ser Ser
 1 5 10 15

Glu Glu Leu Leu Ser Leu Arg Phe Pro Leu His Arg Ala Cys Arg Asp
 20 25 30

Gly Asp Leu Ala Thr Leu Cys Ser Leu Leu Gln Gln Thr Pro His Ala
 35 40 45

His Leu Ala Ser Glu Asp Ser Phe Tyr Gly Trp Thr Pro Val His Trp
 50 55 60

Ala Ala His Phe Gly Lys Leu Glu Cys Leu Val Gln Leu Val Arg Ala
 65 70 75 80

Gly Ala Thr Leu Asn Val Ser Thr Thr Arg Tyr Ala Gln Thr Pro Ala
 85 90 95

His Ile Ala Ala Phe Gly Gly His Pro Gln Cys Leu Val Trp Leu Ile
 100 105 110

Gln Ala Gly Ala Asn Ile Asn Lys Pro Asp Cys Glu Gly Glu Thr Pro
 115 120 125

Ile His Lys Ala Ala Arg Ser Gly Ser Leu Glu Cys Ile Ser Ala Leu
 130 135 140

Val Ala Asn Gly Ala His Val Asp Leu Arg Asn Ala Ser Gly Leu Thr
 145 150 155 160

Ala Ala Asp Ile Ala Gln Thr Gln Gly Phe Gln Glu Cys Ala Gln Phe
 165 170 175

322

Leu Leu Asn Leu Gln Asn Cys His Leu Asn His Phe Tyr Asn Asn Gly
 180 185 190

Ile Leu Asn Gly Gly His Gln Asn Val Phe Pro Asn His Ile Ser Val
 195 200 205

Gly Thr Asn Arg Lys Arg Cys Leu Glu Asp Ser Glu Asp Phe Gly Val
 210 215 220

Lys Lys Ala Arg Thr Glu Ala Gln Ser Leu Asp Ser Ala Val Pro Leu
 225 230 235 240

Thr Asn Gly Asp Thr Glu Asp Asp Ala Asp Lys Met His Val Asp Arg
 245 250 255

Glu Phe Ala Val Val Thr Gly Gly Ser Gly Gln Phe Pro Val Ser Cys
 260 265 270

Asn Asn Asn Pro Met Val Glu Asp Thr Lys Gln Gln Glu Ser Gly Ser
 275 280 285

Val Gly Pro Lys Glu Ile Glu Ile Tyr Thr Val Ser Ala Met Gln Thr
 290 295 300

Pro Cys Arg Cys Arg Asn Gln Tyr Glu Lys Gln
 305 310 315

<210> 250

<211> 142

<212> PRT

<213> Homo sapien

<400> 250

Met Gly Asn Phe Lys Ser Ile Ser Thr Ser Thr Lys Met Val Asn Gly
 1 5 10 15

Arg Lys Ile Thr Thr Lys Arg Ile Val Glu Asn Gly Gln Glu Arg Val
 20 25 30

Glu Val Glu Glu Asp Gly Gln Leu Lys Ser Leu Thr Ile Asn Gly Val
 35 40 45

Ala Asp Asp Asp Ala Leu Ala Glu Glu Arg Met Arg Arg Gly Gln Asn
 50 55 60

Ala Leu Pro Ala Gln Pro Ala Gly Leu Arg Pro Pro Lys Pro Pro Arg
 65 70 75 80

323

Pro Ala Ser Leu Leu Arg His Ala Pro His Cys Leu Ser Glu Glu Glu
85 90 95

Gly Glu Gln Asp Arg Pro Arg Ala Pro Gly Pro Trp Asp Pro Leu Ala
100 105 110

Ser Ala Ala Gly Leu Lys Glu Gly Gly Lys Arg Lys Lys Gln Lys Gln
115 120 125

Arg Glu Glu Ser Lys Lys Lys Lys Ser Thr Lys Gly Asn His
130 135 140

<210> 251
<211> 72
<212> PRT
<213> Homo sapien

<400> 251

Met Gly Leu Ser His Ala Gly Trp His Arg Ala Gly Lys His Glu Ala
1 5 10 15

Ser Pro His Gln Gly Phe Ala Cys Arg Lys Ala Ala Leu Trp Pro Ala
20 25 30

Gly Glu Ala Glu Glu Thr Pro Val Asp Thr Leu Pro Thr Gly Leu Lys
35 40 45

Glu Gly Gly Lys Arg Lys Lys Gln Lys Gln Arg Glu Glu Ser Lys Lys
50 55 60

Lys Lys Ser Thr Lys Gly Asn His
65 70

<210> 252
<211> 122
<212> PRT
<213> Homo sapien

<400> 252

Thr Gly Leu Glu Ala Arg Gly Ala Pro Pro Asp Ala Gly Ala Pro Pro
1 5 10 15

Cys Ser Ala Cys Gly Arg Ala His Ala Leu Gly Ser Ser Val Gly Gln
20 25 30

Asp Cys Leu Glu Ala Thr Leu Ala Arg Gln Asp Tyr Ala Ile Thr Asp

324

35

40

45

Gln Ser Glu Gln Gly Gln Glu Thr Gly Leu Thr Ala Arg Val Ala Gly
 50 55 60

Thr Asp Val Trp Asp Leu Ala Ala Thr Leu Cys Phe Ser Pro Ala Leu
 65 70 75 80

Asn Leu Leu His Phe Pro Leu Val Leu Pro Asp Pro Leu His Ser Phe
 85 90 95

Arg Leu Leu Asn His Ser Ala Cys Cys Trp Asn Ile Ser Gly Phe Arg
 100 105 110

Ser Thr Gly Gly Arg Arg Trp Leu Thr Glu
 115 120

<210> 253

<211> 42

<212> PRT

<213> Homo sapien

<400> 253

Met Ala Lys Lys Ala Gly Leu Cys Leu Gly Gly Ser Arg Gln Gly Gly
 1 5 10 15

Cys Gln Ser Gly Met Val Thr Gly Asn Glu Pro Arg Asp Leu Ala Leu
 20 25 30

Ser His Pro Leu Ser Phe Val Gly Gly Leu
 35 40

<210> 254

<211> 260

<212> PRT

<213> Homo sapien

<400> 254

Val Phe Cys Ser Phe Phe Ala Glu Lys Glu Gln Gln Glu Ala Ile Glu
 1 5 10 15

His Ile Asp Glu Val Gln Asn Glu Ile Asp Arg Leu Asn Glu Gln Ala
 20 25 30

Ser Glu Glu Ile Leu Lys Val Glu Gln Lys Tyr Asn Lys Leu Arg Gln
 35 40 45

325

Pro Phe Phe Gln Lys Arg Ser Glu Leu Ile Ala Lys Ile Pro Asn Phe
 50 55 60

Trp Val Thr Thr Phe Val Asn His Pro Gln Val Ser Ala Leu Leu Gly
 65 70 75 80

Glu Glu Asp Glu Glu Ala Leu His Tyr Leu Thr Arg Val Glu Val Thr
 85 90 95

Glu Phe Glu Asp Ile Lys Ser Gly Tyr Arg Ile Asp Phe Tyr Phe Asp
 100 105 110

Glu Asn Pro Tyr Phe Glu Asn Lys Val Leu Ser Lys Glu Phe His Leu
 115 120 125

Asn Glu Ser Gly Asp Pro Ser Ser Lys Ser Thr Glu Ile Lys Trp Lys
 130 135 140

Ser Gly Lys Asp Leu Thr Lys Arg Ser Ser Gln Thr Gln Asn Lys Ala
 145 150 155 160

Ser Arg Lys Arg Gln His Glu Glu Pro Glu Ser Phe Phe Thr Trp Phe
 165 170 175

Thr Asp His Ser Asp Ala Gly Ala Asp Glu Leu Gly Glu Val Ile Lys
 180 185 190

Asp Asp Ile Trp Pro Asn Pro Leu Gln Tyr Tyr Leu Val Pro Asp Met
 195 200 205

Asp Asp Glu Glu Gly Glu Gly Glu Glu Asp Asp Asp Asp Glu Glu
 210 215 220

Glu Glu Gly Leu Glu Asp Ile Asp Glu Glu Gly Asp Glu Asp Glu Gly
 225 230 235 240

Glu Glu Asp Glu Asp Asp Asp Glu Gly Glu Glu Gly Glu Glu Asp Glu
 245 250 255

Gly Glu Asp Asp
 260

<210> 255
 <211> 285
 <212> PRT
 <213> Homo sapien

326

<400> 255

Ser Leu Gln Asp Lys Arg Ala Pro Ile Pro Glu His Thr Pro Phe Ser
1 5 10 15

Ser Ser Pro Phe Cys Ala Ser Leu Leu Ser Asp Leu Ile Val Ala Pro
20 25 30

Lys Lys Glu Gln Gln Glu Ala Ile Glu His Ile Asp Glu Val Gln Asn
35 40 45

Glu Ile Asp Arg Leu Asn Glu Gln Ala Ser Glu Glu Ile Leu Lys Val
50 55 60

Glu Gln Lys Tyr Asn Lys Leu Arg Gln Pro Phe Phe Gln Lys Arg Ser
65 70 75 80

Glu Leu Ile Ala Lys Ile Pro Asn Phe Trp Val Thr Thr Phe Val Asn
85 90 95

His Pro Gln Val Ser Ala Leu Leu Gly Glu Glu Asp Glu Glu Ala Leu
100 105 110

His Tyr Leu Thr Arg Val Glu Val Thr Glu Phe Glu Asp Ile Lys Ser
115 120 125

Gly Tyr Arg Ile Asp Phe Tyr Phe Asp Glu Asn Pro Tyr Phe Glu Asn
130 135 140

Lys Val Leu Ser Lys Glu Phe His Leu Asn Glu Ser Gly Asp Pro Ser
145 150 155 160

Ser Lys Ser Thr Glu Ile Lys Trp Lys Ser Gly Lys Asp Leu Thr Lys
165 170 175

Arg Ser Ser Gln Thr Gln Asn Lys Ala Ser Arg Lys Arg Gln His Glu
180 185 190

Glu Pro Glu Ser Phe Phe Thr Trp Phe Thr Asp His Ser Asp Ala Gly
195 200 205

Ala Asp Glu Leu Gly Glu Val Ile Lys Asp Asp Ile Trp Pro Asn Pro
210 215 220

Leu Gln Tyr Tyr Leu Val Pro Asp Met Asp Asp Glu Glu Gly Glu Gly
225 230 235 240

327

Glu Glu Asp Asp Asp Asp Asp Glu Glu Glu Glu Gly Leu Glu Asp Ile
 245 250 255

Asp Glu Glu Gly Asp Glu Asp Glu Gly Glu Glu Asp Glu Asp Asp Asp
 260 265 270

Glu Gly Glu Glu Gly Glu Glu Asp Glu Gly Glu Asp Asp
 275 280 285

<210> 256
 <211> 600
 <212> PRT
 <213> Homo sapien

<400> 256

Met Ala Thr Pro Leu Pro Gly Arg Ala Gly Gly Pro Ala Thr Pro Leu
 1 5 10 15

Ser Pro Thr Arg Leu Ser Arg Leu Gln Glu Lys Glu Glu Leu Arg Glu
 20 25 30

Leu Asn Asp Arg Leu Ala His Tyr Ile Asp Arg Val Arg Ala Leu Glu
 35 40 45

Leu Glu Asn Asp Arg Leu Leu Leu Lys Ile Ser Glu Lys Glu Glu Val
 50 55 60

Thr Thr Arg Glu Val Ser Gly Ile Lys Ala Leu Tyr Glu Ser Glu Leu
 65 70 75 80

Ala Asp Ala Arg Arg Val Leu Asp Glu Thr Ala Arg Glu Arg Ala Arg
 85 90 95

Leu Gln Ile Glu Ile Gly Lys Leu Arg Ala Glu Leu Asp Glu Val Asn
 100 105 110

Lys Ser Ala Lys Lys Arg Glu Gly Glu Leu Thr Val Ala Gln Gly Arg
 115 120 125

Val Lys Asp Leu Glu Ser Leu Phe His Arg Ser Glu Val Glu Leu Ala
 130 135 140

Ala Ala Leu Ser Asp Lys Arg Gly Leu Glu Ser Asp Val Ala Glu Leu
 145 150 155 160

Arg Ala Gln Leu Ala Lys Ala Glu Asp Gly His Ala Val Ala Lys Lys

328

165

170

175

Gln Leu Glu Lys Glu Thr Leu Met Arg Val Asp Leu Glu Asn Arg Cys
 180 185 190

Gln Ser Leu Gln Glu Glu Leu Asp Phe Arg Lys Ser Val Phe Glu Glu
 195 200 205

Glu Val Arg Glu Thr Arg Arg Arg His Glu Arg Arg Leu Val Glu Val
 210 215 220

Asp Ser Ser Arg Gln Gln Glu Tyr Asp Phe Lys Met Ala Gln Ala Leu
 225 230 235 240

Glu Glu Leu Arg Ser Gln His Asp Glu Gln Val Arg Leu Tyr Lys Leu
 245 250 255

Glu Leu Glu Gln Thr Tyr Gln Ala Lys Leu Asp Ser Ala Lys Leu Ser
 260 265 270

Ser Asp Gln Asn Asp Lys Ala Ala Ser Ala Ala Arg Glu Glu Leu Lys
 275 280 285

Glu Ala Arg Met Arg Leu Glu Ser Leu Ser Tyr Gln Leu Ser Gly Leu
 290 295 300

Gln Lys Gln Ala Ser Ala Ala Glu Asp Arg Ile Arg Glu Leu Glu Glu
 305 310 315 320

Ala Met Ala Gly Glu Arg Asp Lys Phe Arg Lys Met Leu Asp Ala Lys
 325 330 335

Glu Gln Glu Met Thr Glu Met Arg Asp Val Met Gln Gln Gln Leu Ala
 340 345 350

Glu Tyr Gln Glu Leu Leu Asp Val Lys Leu Ala Leu Asp Met Glu Ile
 355 360 365

Asn Ala Tyr Arg Lys Leu Leu Glu Gly Glu Glu Glu Arg Leu Lys Leu
 370 375 380

Ser Pro Ser Pro Ser Ser Arg Val Thr Val Ser Arg Ala Thr Ser Ser
 385 390 395 400

Ser Ser Gly Ser Leu Ser Ala Thr Gly Arg Leu Gly Arg Ser Lys Arg
 405 410 415

329

Lys Arg Leu Glu Val Glu Glu Pro Leu Gly Ser Gly Pro Ser Val Leu
 420 425 430

Gly Thr Gly Thr Gly Gly Ser Gly Gly Phe His Leu Ala Gln Gln Ala
 435 440 445

Ser Ala Ser Gly Ser Val Ser Ile Glu Glu Ile Asp Leu Glu Gly Lys
 450 455 460

Phe Val Gln Leu Lys Asn Asn Ser Asp Lys Asp Gln Ser Leu Gly Asn
 465 470 475 480

Trp Arg Ile Lys Arg Gln Val Leu Glu Gly Glu Glu Ile Ala Tyr Lys
 485 490 495

Phe Thr Pro Lys Tyr Ile Leu Arg Ala Gly Gln Met Val Thr Val Trp
 500 505 510

Ala Ala Gly Ala Gly Val Ala His Ser Pro Pro Ser Thr Leu Val Trp
 515 520 525

Lys Gly Gln Ser Ser Trp Gly Thr Gly Glu Ser Phe Arg Thr Val Leu
 530 535 540

Val Asn Ala Asp Gly Glu Glu Val Ala Met Arg Thr Val Lys Lys Ser
 545 550 555 560

Ser Val Met Arg Glu Asn Glu Asn Gly Glu Glu Glu Glu Glu Ala
 565 570 575

Glu Phe Gly Glu Glu Asp Leu Phe His Gln Gln Gly Asp Pro Arg Thr
 580 585 590

Thr Ser Arg Gly Cys Tyr Val Met
 595 600

<210> 257
 <211> 620
 <212> PRT
 <213> Homo sapien

<400> 257

Met Ser Pro Pro Ser Pro Gly Arg Arg Arg Glu Gln Arg Arg Pro Arg
 1 5 10 15

330

Ala Ala Ala Thr Met Ala Thr Pro Leu Pro Gly Arg Ala Gly Gly Pro
 20 25 30

Ala Thr Pro Leu Ser Pro Thr Arg Leu Ser Arg Leu Gln Glu Lys Glu
 35 40 45

Glu Leu Arg Glu Leu Asn Asp Arg Leu Ala His Tyr Ile Asp Arg Val
 50 55 60

Arg Ala Leu Glu Leu Glu Asn Asp Arg Leu Leu Leu Lys Ile Ser Glu
 65 70 75 80

Lys Glu Glu Val Thr Thr Arg Glu Val Ser Gly Ile Lys Ala Leu Tyr
 85 90 95

Glu Ser Glu Leu Ala Asp Ala Arg Arg Val Leu Asp Glu Thr Ala Arg
 100 105 110

Glu Arg Ala Arg Leu Gln Ile Glu Ile Gly Lys Leu Arg Ala Glu Leu
 115 120 125

Asp Glu Val Asn Lys Ser Ala Lys Lys Arg Glu Gly Glu Leu Thr Val
 130 135 140

Ala Gln Gly Arg Val Lys Asp Leu Glu Ser Leu Phe His Arg Ser Glu
 145 150 155 160

Val Glu Leu Ala Ala Ala Leu Ser Asp Lys Arg Gly Leu Glu Ser Asp
 165 170 175

Val Ala Glu Leu Arg Ala Gln Leu Ala Lys Ala Glu Asp Gly His Ala
 180 185 190

Val Ala Lys Lys Gln Leu Glu Lys Glu Thr Leu Met Arg Val Asp Leu
 195 200 205

Glu Asn Arg Cys Gln Ser Leu Gln Glu Glu Leu Asp Phe Arg Lys Ser
 210 215 220

Val Phe Glu Glu Glu Val Arg Glu Thr Arg Arg Arg His Glu Arg Arg
 225 230 235 240

Leu Val Glu Val Asp Ser Ser Arg Gln Gln Glu Tyr Asp Phe Lys Met
 245 250 255

Ala Gln Ala Leu Glu Glu Leu Arg Ser Gln His Asp Glu Gln Val Arg

331

260

265

270

Leu Tyr Lys Leu Glu Leu Glu Gln Thr Tyr Gln Ala Lys Leu Asp Ser
 275 280 285

Ala Lys Leu Ser Ser Asp Gln Asn Asp Lys Ala Ala Ser Ala Ala Arg
 290 295 300

Glu Glu Leu Lys Glu Ala Arg Met Arg Leu Glu Ser Leu Ser Tyr Gln
 305 310 315 320

Leu Ser Gly Leu Gln Lys Gln Ala Ser Ala Ala Glu Asp Arg Ile Arg
 325 330 335

Glu Leu Glu Glu Ala Met Ala Gly Glu Arg Asp Lys Phe Arg Lys Met
 340 345 350

Leu Asp Ala Lys Glu Gln Glu Met Thr Glu Met Arg Asp Val Met Gln
 355 360 365

Gln Gln Leu Ala Glu Tyr Gln Glu Leu Leu Asp Val Lys Leu Ala Leu
 370 375 380

Asp Met Glu Ile Asn Ala Tyr Arg Lys Leu Leu Glu Gly Glu Glu Glu
 385 390 395 400

Arg Leu Lys Leu Ser Pro Ser Pro Ser Ser Arg Val Thr Val Ser Arg
 405 410 415

Ala Thr Ser Ser Ser Ser Gly Ser Leu Ser Ala Thr Gly Arg Leu Gly
 420 425 430

Arg Ser Lys Arg Lys Arg Leu Glu Val Glu Glu Pro Leu Gly Ser Gly
 435 440 445

Pro Ser Val Leu Gly Thr Gly Thr Gly Gly Ser Gly Gly Phe His Leu
 450 455 460

Ala Gln Gln Ala Ser Ala Ser Gly Ser Val Ser Ile Glu Glu Ile Asp
 465 470 475 480

Leu Glu Gly Lys Phe Val Gln Leu Lys Asn Asn Ser Asp Lys Asp Gln
 485 490 495

Ser Leu Gly Asn Trp Arg Ile Lys Arg Gln Val Leu Glu Gly Glu Glu
 500 505 510

332

Ile Ala Tyr Lys Phe Thr Pro Lys Tyr Ile Leu Arg Ala Gly Gln Met
 515 520 525

Val Thr Val Trp Ala Ala Gly Ala Gly Val Ala His Ser Pro Pro Ser
 530 535 540

Thr Leu Val Trp Lys Gly Gln Ser Ser Trp Gly Thr Gly Glu Ser Phe
 545 550 555 560

Arg Thr Val Leu Val Asn Ala Asp Gly Glu Glu Val Ala Met Arg Thr
 565 570 575

Val Lys Lys Ser Ser Val Met Arg Glu Asn Glu Asn Gly Glu Glu Glu
 580 585 590

Glu Glu Glu Ala Glu Phe Gly Glu Glu Asp Leu Phe His Gln Gln Gly
 595 600 605

Asp Pro Arg Thr Thr Ser Arg Gly Cys Tyr Val Met
 610 615 620

<210> 258

<211> 237

<212> PRT

<213> Homo sapien

<400> 258

Met Ser Pro Pro Ser Pro Gly Arg Arg Arg Glu Gln Arg Arg Pro Arg
 1 5 10 15

Ala Ala Ala Thr Met Ala Thr Pro Leu Pro Gly Arg Ala Gly Gly Pro
 20 25 30

Ala Thr Pro Leu Ser Pro Thr Arg Leu Ser Arg Leu Gln Glu Lys Glu
 35 40 45

Glu Leu Arg Glu Leu Asn Asp Arg Leu Ala His Tyr Ile Asp Arg Val
 50 55 60

Arg Ala Leu Glu Leu Glu Asn Asp Arg Leu Leu Leu Lys Ile Ser Glu
 65 70 75 80

Lys Glu Glu Val Thr Thr Arg Glu Val Ser Gly Ile Lys Ala Leu Tyr
 85 90 95

333

Glu Ser Glu Leu Ala Asp Ala Arg Arg Val Leu Asp Glu Thr Ala Arg
 100 105 110

Glu Arg Ala Arg Leu Gln Ile Glu Ile Gly Lys Leu Arg Ala Glu Leu
 115 120 125

Asp Glu Val Asn Lys Ser Ala Lys Lys Arg Glu Gly Glu Leu Thr Val
 130 135 140

Ala Gln Gly Arg Val Lys Asp Leu Glu Ser Leu Phe His Arg Ser Glu
 145 150 155 160

Val Glu Leu Ala Ala Ala Leu Ser Asp Lys Arg Gly Leu Glu Ser Asp
 165 170 175

Val Ala Glu Leu Arg Ala Gln Leu Ala Lys Ala Glu Asp Gly His Ala
 180 185 190

Val Ala Lys Lys Gln Leu Glu Lys Gly Cys Pro Cys Ser Gln Lys Ser
 195 200 205

Arg Ser His Val Asp Arg Gly Gly Arg Ile Leu Pro Lys His Phe Leu
 210 215 220

Leu Glu Ala Thr Pro Leu Cys Ser Gln Ser Gly Gly Trp
 225 230 235

<210> 259
 <211> 620
 <212> PRT
 <213> Homo sapien

<400> 259

Met Ser Pro Pro Ser Pro Gly Arg Arg Arg Glu Gln Arg Arg Pro Arg
 1 5 10 15

Ala Ala Ala Thr Met Ala Thr Pro Leu Pro Gly Arg Ala Gly Gly Pro
 20 25 30

Ala Thr Pro Leu Ser Pro Thr Arg Leu Ser Arg Leu Gln Glu Lys Glu
 35 40 45

Glu Leu Arg Glu Leu Asn Asp Arg Leu Ala His Tyr Ile Asp Arg Val
 50 55 60

Arg Ala Leu Glu Leu Glu Asn Asp Arg Leu Leu Leu Lys Ile Ser Glu
 65 70 75 80

334

Lys Glu Glu Val Thr Thr Arg Glu Val Ser Gly Ile Lys Ala Leu Tyr
85 90 95

Glu Ser Glu Leu Ala Asp Ala Arg Arg Val Leu Asp Glu Thr Ala Arg
100 105 110

Glu Arg Ala Arg Leu Gln Ile Glu Ile Gly Lys Leu Arg Ala Glu Leu
115 120 125

Asp Glu Val Asn Lys Ser Ala Lys Lys Arg Glu Gly Glu Leu Thr Val
130 135 140

Ala Gln Gly Arg Val Lys Asp Leu Glu Ser Leu Phe His Arg Ser Glu
145 150 155 160

Val Glu Leu Ala Ala Ala Leu Ser Asp Lys Arg Gly Leu Glu Ser Asp
165 170 175

Val Ala Glu Leu Arg Ala Gln Leu Ala Lys Ala Glu Asp Gly His Ala
180 185 190

Val Ala Lys Lys Gln Leu Glu Lys Glu Thr Leu Met Arg Val Asp Leu
195 200 205

Glu Asn Arg Cys Gln Ser Leu Gln Glu Glu Leu Asp Phe Arg Lys Ser
210 215 220

Val Phe Glu Glu Glu Val Arg Glu Thr Arg Arg Arg His Glu Arg Arg
225 230 235 240

Leu Val Glu Val Asp Ser Ser Arg Gln Gln Glu Tyr Asp Phe Lys Met
245 250 255

Ala Gln Ala Leu Glu Glu Leu Arg Ser Gln His Asp Glu Gln Val Arg
260 265 270

Leu Tyr Lys Leu Glu Leu Glu Gln Thr Tyr Gln Ala Lys Leu Asp Ser
275 280 285

Ala Lys Leu Ser Ser Asp Gln Asn Asp Lys Ala Ala Ser Ala Ala Arg
290 295 300

Glu Glu Leu Lys Glu Ala Arg Met Arg Leu Glu Ser Leu Ser Tyr Gln
305 310 315 320

335

Leu Ser Gly Leu Gln Lys Gln Ala Ser Ala Ala Glu Asp Arg Ile Arg
 325 330 335

Glu Leu Glu Glu Ala Met Ala Gly Glu Arg Asp Lys Phe Arg Lys Met
 340 345 350

Leu Asp Ala Lys Glu Gln Glu Met Thr Glu Met Arg Asp Val Met Gln
 355 360 365

Gln Gln Leu Ala Glu Tyr Gln Glu Leu Leu Asp Val Lys Leu Ala Leu
 370 375 380

Asp Met Glu Ile Asn Ala Tyr Arg Lys Leu Leu Glu Gly Glu Glu Glu
 385 390 395 400

Arg Leu Lys Leu Ser Pro Ser Pro Ser Ser Arg Val Thr Val Ser Arg
 405 410 415

Ala Thr Ser Ser Ser Ser Gly Ser Leu Ser Ala Thr Gly Arg Leu Gly
 420 425 430

Arg Ser Lys Arg Lys Arg Leu Glu Val Glu Glu Pro Leu Gly Ser Gly
 435 440 445

Pro Ser Val Leu Gly Thr Gly Thr Gly Gly Ser Gly Gly Phe His Leu
 450 455 460

Ala Gln Gln Ala Ser Ala Ser Gly Ser Val Ser Ile Glu Glu Ile Asp
 465 470 475 480

Leu Glu Gly Lys Phe Val Gln Leu Lys Asn Asn Ser Asp Lys Asp Gln
 485 490 495

Ser Leu Gly Asn Trp Arg Ile Lys Arg Gln Val Leu Glu Gly Glu Glu
 500 505 510

Ile Ala Tyr Lys Phe Thr Pro Lys Tyr Ile Leu Arg Ala Gly Gln Met
 515 520 525

Val Thr Val Trp Ala Ala Gly Ala Gly Val Ala His Ser Pro Pro Ser
 530 535 540

Thr Leu Val Trp Lys Gly Gln Ser Ser Trp Gly Thr Gly Glu Ser Phe
 545 550 555 560

336

Arg Thr Val Leu Val Asn Ala Asp Gly Glu Glu Val Ala Met Arg Thr
565 570 575

Val Lys Lys Ser Ser Val Met Arg Glu Asn Glu Asn Gly Glu Glu Glu
580 585 590

Glu Glu Glu Ala Glu Phe Gly Glu Glu Asp Leu Phe His Gln Gln Gly
595 600 605

Asp Pro Arg Thr Thr Ser Arg Gly Cys Tyr Val Met
610 615 620